USERS' MANUAL
ENVIRONMENTAL EXPOSURE MODULE

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The MITRE Corporation
January 16, 1987

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16. Abstract (Limit: 200 words)

The Environmental Exposure (EE) module consists of a list of options that allows users to access NOHIMS Industrial Hygiene (IH) Component database in order to perform these functions: provide a hazard profile of workplace, identify employees at risk by exposures to stressors in workplace, and perform various administrative planning and record keeping functions (related to IH surveys).

This manual provides an overview of the EE module functions available through the options. Emphasis is on reports available from this module.

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

APPENDICES

TABLE OF CONTENTS (Concluded)

LIST OF FIGURES

USERS' MANUAL

ENVIRONMENTAL EXPOSURE MODULE

1.0 BACKGROUND

1.1 Purpose of the Manual

This manual describes the capabilities of the Environmental Exposure (EE) module of the Navy Medical Command's (NAVMED) Navy Occupational Health Information Management System (NOHIMS). After presenting some background information on the total NOHIMS, the manual describes the module's significant data input and output processes. Examples of the output reports appear in the appendices. The information in this document is intended to help the reader understand how this module can help improve the management, evaluation, and tracking of environmental exposures in the workplace.

1.2 References

The following publications provide background information on the EE module:

- NOHIMS Environmental and Personal Exposure Module Functional Design Specifications
- Navy Occupational Safety and Health (NAVOSH) Program Manual, OPNAV Instruction 5100.23B

1.3 Terms and Abbreviations

The following terms and abbreviations are used in this manual:

- ACGIH: American College of Governmental Industrial Hygienists.
- Boundary: An area isolated from surrounding areas in which a process is being conducted which produces high concentrations of a stressor.
- EE Module: The Environmental Exposure module.
- FileMan: The VA's data base management package used to develop NOHIMS.

- HMIS: Hazardous Materials Information System - a computer-based information system developed to accumulate, maintain, and disseminate (on magnetic tape and microfiche) important characteristics of hazardous materials which exist throughout the DoD.

- IH: Industrial Hygienist, Industrial Hygiene.

- Inspection: A comprehensive survey of all or part of a workplace in order to detect safety and health hazards as distinguished from routine, day-to-day evaluation and monitoring by local IH personnel.

- MSAL: Medical Surveillance Action Level - medical examination qualification is required for any employee expected to enter into areas where airborne concentration may regularly exceed the specified airborne action level. The MSAL includes both a specified stressor concentration (generally about one-half of the Permissible Exposure Limit (PEL) and a number of days or duration of exposure at or above the specified stressor concentration.

- MUMPS: Massachusetts General Hospital Utility Multi-Programming System - a programming language used to develop NOHIMS.

- NARF: Naval Air Rework Facility.

- NAVMED: Navy Medical Command

- NAVOSH: Navy Occupational Safety and Health.

- NIOSH: National Institute of Occupational Safety and Health.

- NOHIMS: Naval Occupational Health Information Management System

- OSHA: Occupational Safety and Health Administration, Department of Labor.

- PEL: Permissible Exposure Limit. PEL's are published by OSHA. They are based on interrelationships between data from experimental animal and human studies and data from industrial experience obtained through clinical and epidemiological studies of workers in order to prevent irritation, discomfort, or occupational illnesses. PEL's are stressor concentration values in air below which nearly all persons may be exposed for given durations without adverse effects.

  1. Permissible Exposure Limit - Time Weighted Average (PEL-TWA). The concentrations in air of a stressor averaged over an eight-hour or ten-hour workday as appropriate. There may be contact with time period concentrations above the PEL concentration as

long as they are balanced by time period concentrations below the PEL concentration so that the concentration averaged over the appropriate workday does not exceed the PEL-TWA.

2. Permissible Exposure Limit - Ceiling (PEL-C). A PEL-C is a concentration which may not be exceeded, even instantaneously. The irritant gases or compounds with a ceiling are denoted by a "C".

- o STEL: Short Term Exposure Limit (a 15-minute time-weighted average exposure measurement).

- o Stressor: (Toxic Substance) Any chemical substance, biological agent (bacteria, virus, fungus, etc.), or physical stress, noise, heat, cold, hypo-hyperbaric pressure, etc., which is:

  1. Regulated by an NAVOSH standard or Federal law or rule due to a hazard to health.

  2. Listed in the latest printed edition of the National Institue for occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemicals.

- o TC Number: An approval number assigned by NIOSH and the Mine Safety Health Administration in testing and certifying the respirator.

- o Template: A file entry containing a description of an input sequence or an output report.

- o Tickler: A dated "scratch pad" file for noting reminders and/or messages.

- o TLV: Threshold Limit Value. Threshold limit values are established by the American Conference of Governmental Industrial Hygienists (ACGIH). TLVs refer to airborne concentrations of a substance and represent conditions under which it is believed that nearly all workers may be exposed day after day without adverse effect.

- o TWA: Time-Weighted Average (an exposure measurement calculated to represent an eight hour exposure).

- o VA: Veterans Administration.

- o VDT: Video Display Terminal.

- o Walkthrough: See Inspection.

1.4 Module Overview

As shown in Figure 1-1, the EE module performs four major processes:

- o Maintains Boundary Data
- o Maintains Equipment Data
- o Maintains Survey Data
- o Supports Monitoring Planning

In maintaining boundary data the module keeps an up-to-date record of each boundary's status by recording when each boundary is opened and closed. Record keeping of Boundary Access Logs provides a detailed view of the amount of time employees are spending in boundaries. Using this information, the IH can assess the compliance of Naval personnel with policies that limit the number of days an employee is allowed to work in boundary operations each quarter and annually.

In maintaining equipment data the module keeps an on-line inventory of all collection instruments used in a facility. This data is used to reduce the amount of data entry time for samples collected in the conduct of industrial hygienist (IH) surveys. It also supports analysis of sampling results obtained with a collection instrument, which may point to problems with the performance of a particular piece of equipment. An optional feature of this process allows the facility to maintain calibration history data for each collection instrument. Using the calibration due dates, the process reports the collection instruments due for calibration in a given time frame.

By far the most important and complex aspect of the EE module is the maintenance of survey data. Data collected during IH surveys of the workplace, including walkthroughs, material inventories, air samples, direct reading samples, noise surveys, heatstress surveys, bulk or wipe samples, and ventilation surveys, is maintained on-line. This data is made readily available in a variety of survey reports for the use of the IH's responsible for recognition, evaluation, and control of hazards in the workplace. By reviewing the survey data, the IH professional can gain an improved view of the hazard profile of the facility and can design more effective and efficacious programs to protect the worker. The module undertakes to support both field IHs and management by providing survey reports at various levels of aggregation. The module automatically evaluates sample data and reports samples collected that are over the defined limit. An Over Medical Surveillance Action Level (MSAL) report is produced to show each person who has been sampled or in the area during sampling when an over limit condition was found. Referring to reported cases of over limit exposures, the IH can send form letter exposure notices to the affected employee(s) via the module.

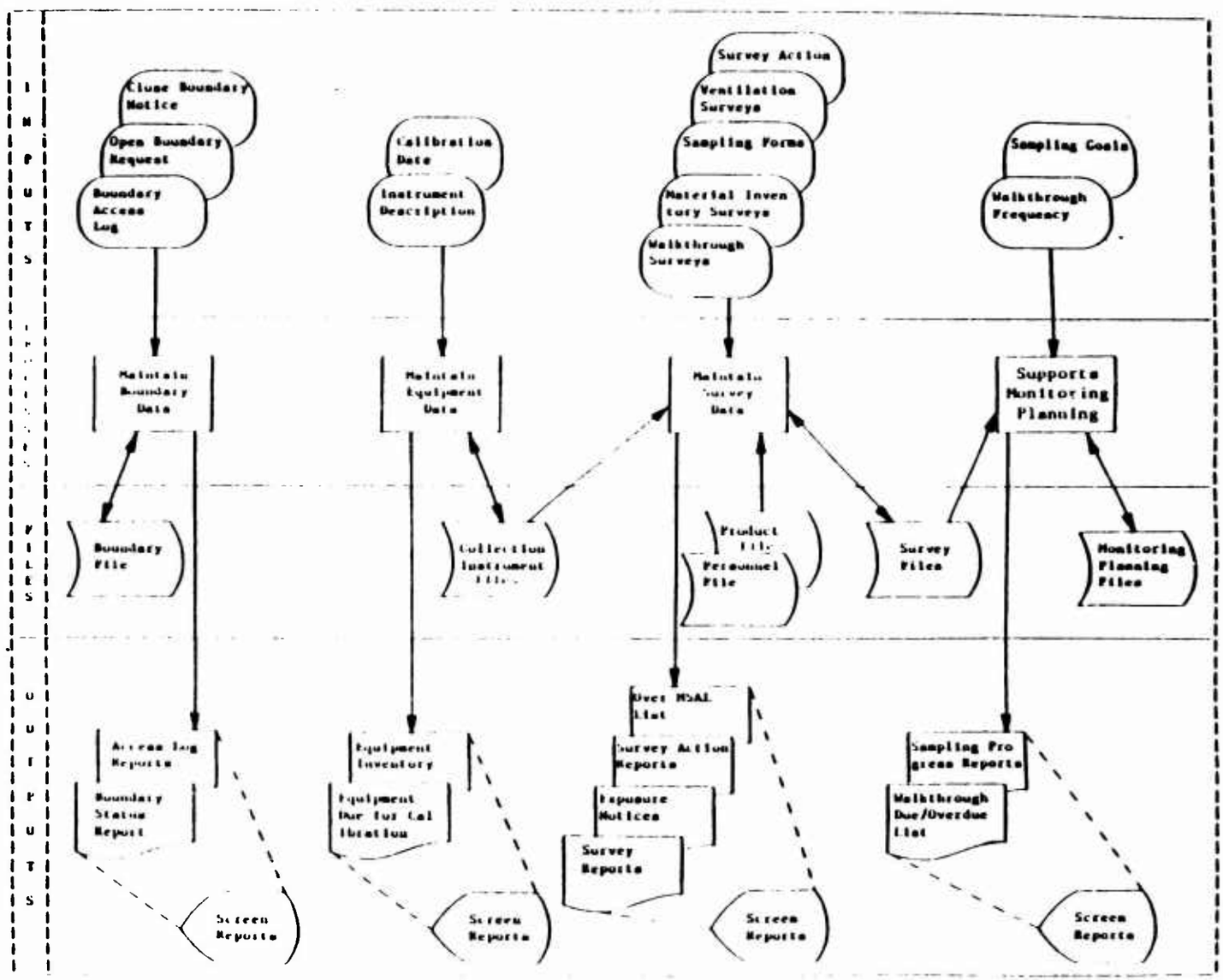

FIGURE 1-1

NOHIMS ENVIRONMENTAL EXPOSURE MODOULE OVERVIEW

The final major feature of the survey data maintenance process is its ability to handle survey actions. This feature provides a scratch pad or reminder file for the IH to record notes of some specified follow-up action to be taken. For the IH who uses this capability, there may be an increased sense of thoroughness in the execution of his or her job.

A support process for monitoring planning is part of the EE module. The process allows the User to define the walkthrough frequency (if other than every 12 months) for each location/operation. Walkthroughs Due and Overdue Reports then remind the persons responsible for planning IH activity of where walkthroughs need to be done according to the entered frequency. Additional support is provided to the IH manager in the area of sampling activity. Once sampling goals have been established and entered into the computer, the module provides a Sampling Progress Report which shows the number of samples collected for each goal set and the percent completed of the goal. Together these two support functions provide IH managers with information that enables them to make use of the monitoring plans established to govern the scheduling of IH work, and to determine the degree to which they are being successful in executing the plans as established.

2.0 NOHIMS OVERVIEW

2.1 NOHIMS Modules

NOHIMS is divided into two separate components--the Industrial component and the Medical component. The Industrial component consists of four major application modules--Administration, Environmental Exposure, Medical Exam Scheduling, and Hazardous Materials Control--and various special purpose support modules. The Administration module maintains files that are used by all or most of the other application modules; these files contain data on employees, locations, operations, occupations, stressors, and agencies. The supporting modules, to be developed at a later date, will provide interfaces to statistical and graphics packages and will also permit transmission of data between NOHIMS computers. The Medical component of NOHIMS is a modification of the public-domain software package COSTAR (COmputer-STored Ambulatory Recordkeeping system).

2.2 System Environment

NOHIMS will be implemented in medical clinics at Naval Air Rework Facilities (NARF's) and Navy shipyards navy-wide; computer hardware dedicated for use by NOHIMS will be installed in these facilities. The system will be hosted on minicomputers using video display terminals (VDTs), workstations, and printers located throughout the host facility. The size and number of minicomputers will differ from location to location, depending on workload and geographic distribution considerations. Data will be entered on-line and may be retrieved either on-line or via reports printed at night (or any later time).

NOHIMS is programmed in the MUMPS programming language, the Veterans Administration (VA) FileMan and Kernel software packages, and the COSTAR software package. Initially developed at the Laboratory of Computer Science at Massachusetts General Hospital, the Massachusetts General Hospital Utility Multi-Programming System (MUMPS) programming language is a combination operating system, file handler, and interpreter. The language was designed from its conception for use in an on-line, multi-user environment. MUMPS is a general-purpose language especially suited to storing and retrieving hierarchical data and processing strings, e.g., free text data, efficiently.

Using the MUMPS language, the VA developed the FileMan software package. A programmer or an end-user can use the features of the FileMan to specify the characteristics of files and/or fields within these files and to save these specifications in a data dictionary, to specify standard input and output processes and to store these processes in templates, and to execute ad hoc queries against a FileMan data base. The VA Kernel displays and manages the system's menus, controls user and device access to the system, manages the security features associated with menus, devices, and users, provides electronic mail functions, and enables users to schedule jobs for later

execution. Most NOHIMS files and input and output processes are implemented using FileMan. Processes that could not be efficiently or effectively accomplished using the features available in FileMan were developed using the MUMPS programming language.

2.3 System Data Base

NOHIMS contains over 100 files. There are two types of files:

- Application Files--These files are primarily intended to support the functions of a specific module, although in certain cases they may be used by other modules. In addition, the contents of these files change frequently as new data is added to the files or old data is removed from these files.

- Reference Files--These files are primarily intended to be used by a specific module, although in certain cases they may also be used by more than one module. These files differ from application files in that they contain controlled vocabularies of terms. The contents of these files are usually static or change slowly over time.

In many cases, the contents of reference files have been received from various sources within the Navy. It is possible, however, for the local site to build its own reference files. The files used by the Administration module--Agency, Employee, Location, Operation, Occupation, and Stressor--frequently act as reference files in that they control what data can be entered into certain data fields. The contents of three of these files, Agency, Employee, and Location, can be changed by the local site.

There are no software limitations on the size of files, the number of fields in the files, or the number of files in the system.

3.0 MODULE INPUT PROCESSES

3.1 Summary of Input Processes

The EE module contains many menu options that enable the user to enter data into the module's files or to edit or delete existing data. These options can be grouped into processes where each process performs enter, edit, or deletion activities on a specific type of data. The EE module contains the following major input processes for entry and edit of data:

- o Enter/Edit Boundary Data
- o Enter/Edit Equipment Data
- o Enter/Edit Sampling Data
- o Enter/Edit Ventilation Survey Data
- o Enter/Edit Walkthrough Survey Data
- o Enter/Edit Material Inventory Data
- o Enter/Edit Material Composition
- o Enter/Edit Monitoring Planning Data
- o Enter/Edit Laboratory Tracking Data
- o Enter/Edit Survey Actions
- o Enter/Edit Exposure Notice Form Letters
- o Enter/Edit Reference Tables

These processes are discussed in the following paragraphs.

3.2 Enter/Edit Boundary Data

The Enter/Edit Boundary Data input process (Figure 3-1) is used to enter and to modify all data concerning the status and location of boundary operations in the facility. The following types of data are entered or edited:

- o Open Boundary Transaction--When the IH office is notified that a boundary operation is to be performed, a boundary number is assigned and an open boundary transaction is entered into the system. The open boundary transaction describes the location of the boundary, the

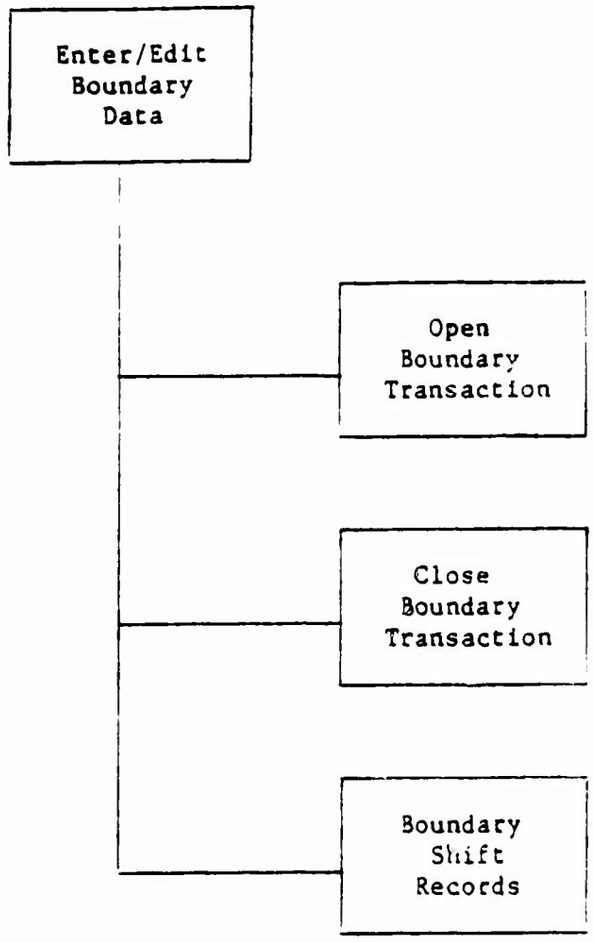

FIGURE 3-1

ENTER/EDIT BOUNDARY DATA PROCESS

operation being performed, the location, the shop responsible for the operation, and the type of boundary, i.e., glove-bag, isolated, or controlled.

- Close Boundary Transaction--When the boundary operation is finished and the boundary ceases to exist, the boundary record is closed using the close boundary transaction. The date and time the boundary was disestablished are maintained. The record of a closed boundary is still maintained in the system; closing a boundary does not cause its record to be deleted.

- Boundary Shift Records--Certain records are required to be maintained for each shift of work done in certain types of boundary operations. The supervisor checklist and the boundary access log are part of the shift records. The EE module allows the user to indicate whether the supervisor checklist has been received and to enter the access data from boundary access logs. An example of a Boundary Access Log form is shown in Appendix A.

3.3 Enter/Edit Equipment Data

The Enter/Edit Equipment Data input process (Figure 3-2) is used to enter and edit the data describing all the collection instruments used in surveying the workplace. If the system is used to manage the calibration of the instruments, the calibration data is entered also. The following specific types of data are entered:

- Equipment Data--Each collection instrument used in surveys of the workplace must be described to the EE module. General descriptive information such as the manufacturer, model number, instrument type, and instrument serial number can be entered. The user may also enter the local storage location of the instrument.

- Calibration Data--The user may wish to keep track of the calibration history of an instrument. The EE module permits the user to record the last calibration date for each instrument and to subsequently record the calibration dates as the instrument is recalibrated and certified. At the same time, the user may enter when the instrument needs to be recalibrated and which agency usually does the calibration.

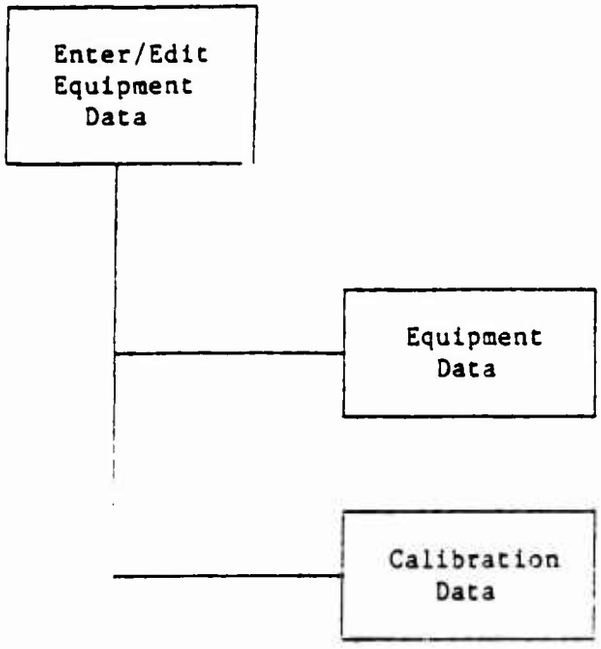

FIGURE 3-2

ENTER/EDIT EQUIPMENT DATA PROCESS

3.4 Enter/Edit Sampling Data

The Enter/Edit Sampling Data input process (Figure 3-3) is used to enter and edit the data from sample survey forms into the system. All data that is essentially quantitative in nature is entered in this process. Many of the features of the EE module rely on the sampling data entered in this process. The entry of sampling data supports the recordkeeping of exposure data on each individual, each operation, each location, and each shop. The data thus recorded supports queries concerning exposures in the workplace. It also supports the determination of an individual's need for medical examination based on actual exposures. Examples of each of the sample collection forms appear in Appendix A. The forms that are entered as part of sampling data are the following:

- Industrial Hygiene Survey Cover Sheet--The Cover Sheet describes the conditions present at the time the samples were collected. It also contains administrative data elements such as who conducted the survey, the date on which it was conducted, the location and operation, and the engineering controls in use at the time. There may be several cover sheets and attached sampling forms within a complete sample survey to represent the different dates, locations, and operations surveyed.

- Air Sample Form--Each set of air samples collected is recorded on a separate Air Sample form. The form contains the sample type (personal or general area), the identification of the collection instrument, the sampling strategy, the employee sampled (for a personal sample), and the respirator and personal protective equipment in use, the stressors measured and their concentration, and the identity of other persons in the area at the time of sampling who are to be considered similarly exposed. The form also contains other information required for maintaining a complete record of the sampling of the workplace, but the above items are those entered into the system.

- Direct Reading Sample Form--The Direct Reading Sample Forms are similar to the Air Sample Forms. The data fields entered from these forms are identical to those described above for the air sampling form.

- Noise Survey Form--Noise Survey Forms may contain several measurements on a single form. The identifying data items entered from the form are similar to those entered for an air sample. Results entered include noise dosimeter measurements and sound level meter measurements.

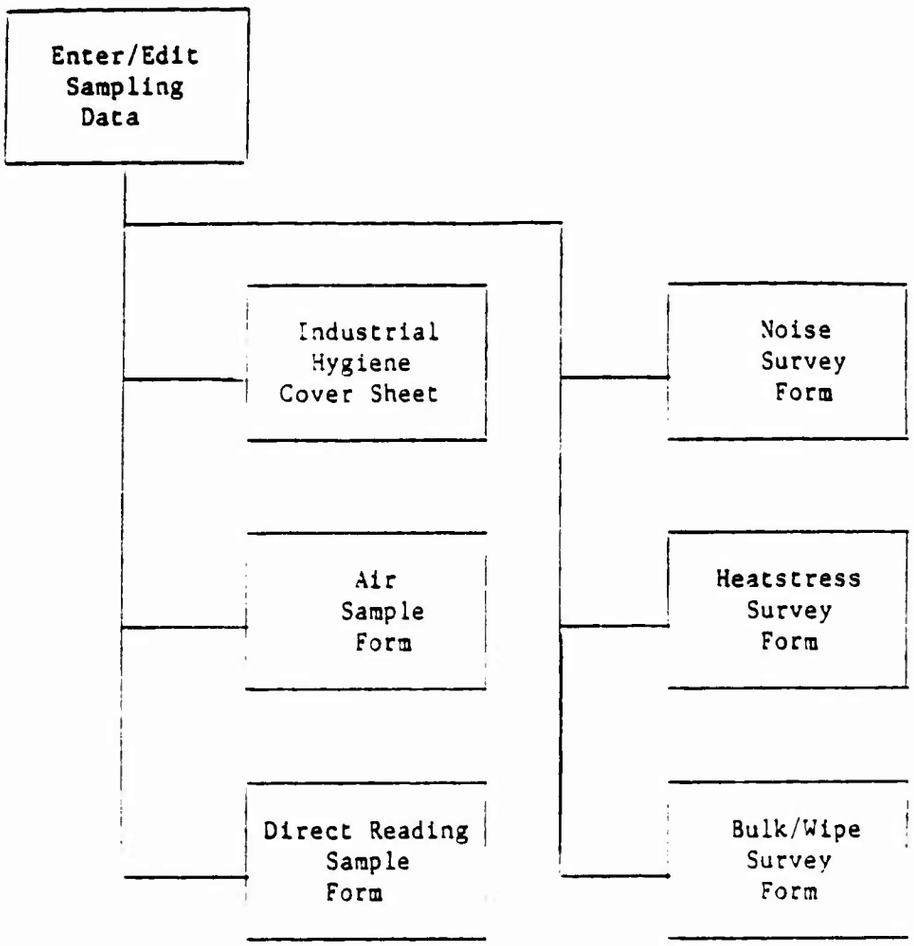

FIGURE 3-3

ENTER/EDIT SAMPLING DATA PROCESS

- o Heatstress Survey Form--Heatstress survey measurements are always conducted as general area samples. The Heatstress Survey Form contains the identification of the collection instruments and the result of the various measurements. The average result measurements are entered into the system.

- o Bulk/Wipe Survey Form--When bulk or wipe samples are collected, the Bulk Sample form or the Wipe Sample form is filled out and entered into the system.

3.5 Enter/Edit Ventilation Survey Data

The Enter/Edit Ventilation Survey Data input process is used exclusively for the entry and editing of Ventilation Survey forms. An example of the Ventilation Survey form is shown in Appendix A.

3.6 Enter/Edit Walkthrough Data

The Enter/Edit Walkthrough Data input process (Figure 3-4) is used to enter all data gathered in the field as part of a routine or special walkthrough. The walkthrough data is divided into the following three different forms to facilitate its collection in the field:

- o Walkthrough Survey Cover Sheet--The Walkthrough Survey Cover Sheet identifies the walkthrough by its survey number, type of walkthrough, dates during which the walkthrough was conducted, and investigators. A comment field is available for the investigator to make any notes which should be considered in review of the walkthrough data.

- o Walkthrough Survey Form--The Walkthrough Survey Form contains space for the investigator to record a description of the operation/ location and the other relevant data for the walkthrough.

- o Material Survey Form--During a walkthrough, the investigator identifies the materials that are used in the operation. These materials are recorded on the Material Survey Form and the data is entered as part of the walkthrough.

Examples of these forms appear in Appendix A.

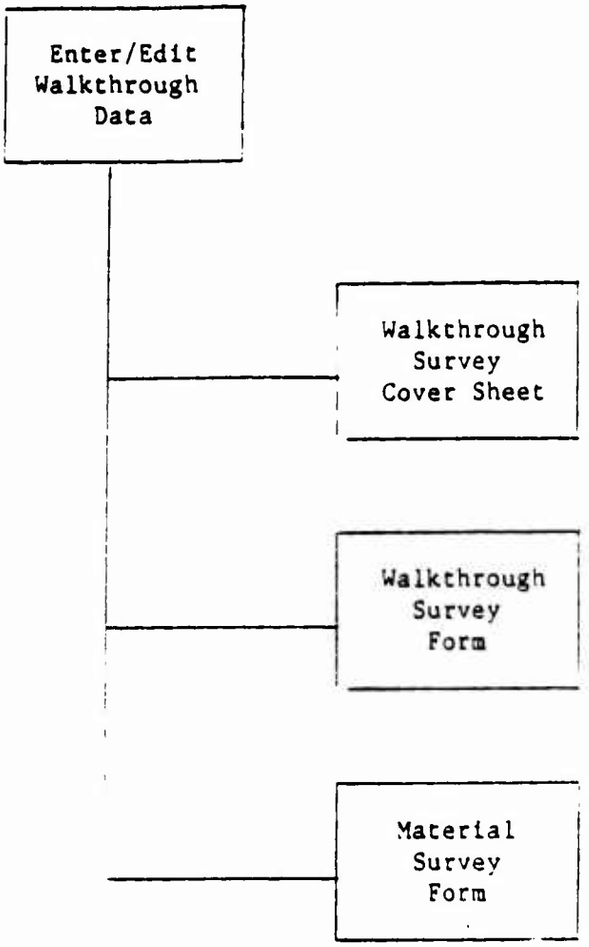

FIGURE 3-4

ENTER/EDIT WALKTHROUGH DATA PROCESS

3.7 Enter/Edit Material Inventory Data

The Enter/Edit Material Inventory Data input process (Figure 3-5) is used to maintain the data from Material Inventory surveys conducted in the workplace. The forms used to collect material inventory data are the same as those used for walkthrough data collection, and are as follows:

- Walkthrough Survey Cover Sheet--The same form that is used to identify a Walkthrough Survey is used to identify the locations contained in a Material Inventory Survey. See Appendix A for an example of the form.

- Material Survey Form--The Material Survey Form is the data collection document for a Material Inventory survey. For each material a quantity and units is recorded and entered into the system. An example of the form is shown in Appendix A.

3.8 Enter/Edit Material Composition

The Enter/Edit Material Composition input process (Figure 3-6) is used to maintain a list of products used in the workplace. The file created by this process links the EE module materials data, i.e., materials found during material inventory surveys of walkthroughs surveys, and the Hazardous Materials Information System (HMIS) records that are on file. In the material composition record for a material product, a stressor list is maintained which drives the creation of a stressor list for walkthrough data. The data maintained is of two types as follows:

- Product Data--The material product data that are entered include the product name, synonyms, and a stressor list. The stressor list may be based on any expert resource the IH professional wishes to use. In the course of walkthrough data entry, when a material product is entered, the system will automatically compose a list of stressors in the workplace based on the stressor list in the material composition file and the additional stressors explicitly named in the walkthrough data entry process.

- HMIS Linkage Data--Each material product on file may be linked to one or more HMIS material records. As the IH professional sees fit, the HMIS linkage is established through a simple data entry process.

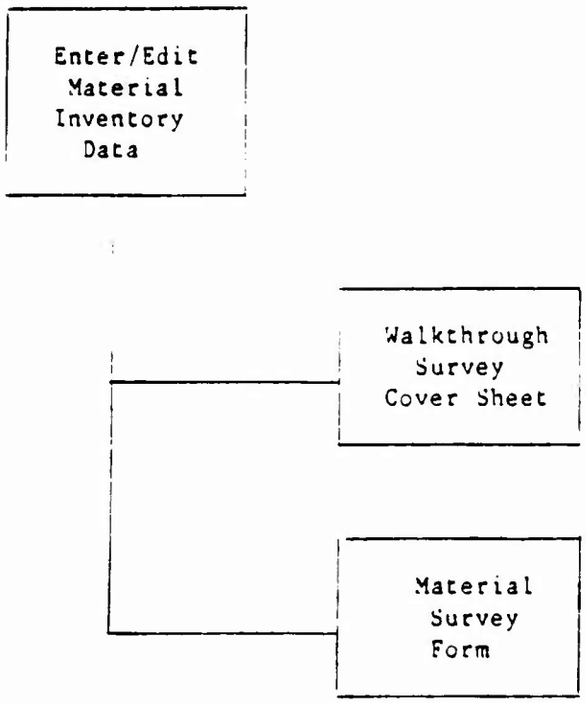

FIGURE 3-5

ENTER/EDIT MATERIAL INVENTORY DATA PROCESS

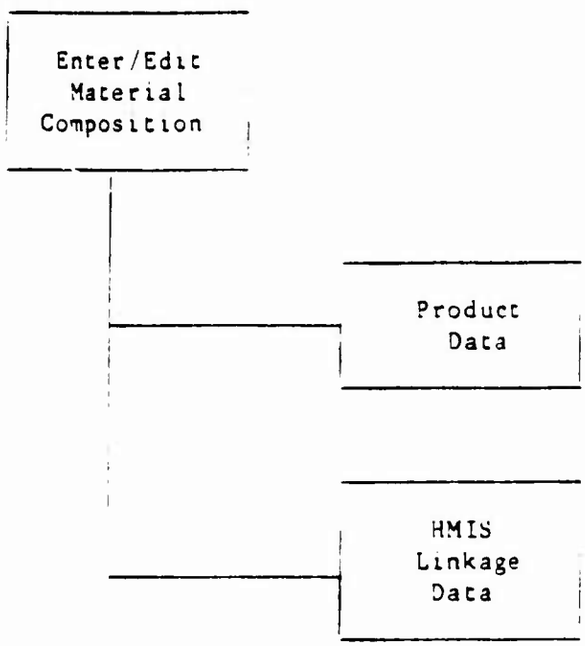

FIGURE 3-6

ENTER/EDIT MATERIAL COMPOSITION DATA PROCESS

3.9 Enter/Edit Monitoring Planning Data

The Enter/Edit Monitoring Planning Data input process (Figure 3-7) maintains walkthrough frequency for each location/operation in which walkthroughs are conducted. It also enables the user to enter the sampling goals that have been established as a result of the annual inspection process. The data entered is the following:

- Walkthrough Frequency--The system maintains a frequency for conducting walkthrough surveys in each location surveyed. The system will automatically establish the frequency as "12 months" in keeping with OPNAVINST 5100.23B direction. The user may wish to alter the frequency, however, and may enter a different frequency (in months).

- Sampling Goals--The user may also establish goals for sampling stressors in the environments of the workplace. Each environment is composed of a location and an operation. The user enters for each environment the stressor list and annual and overall goals for sampling. These numbers are then used in producing the Sampling Progress Report discussed in Section 4.9.

3.10 Enter/Edit Laboratory Tracking Data

The Enter/Edit Laboratory Tracking Data input process (Figure 3-8) is used to keep track of the samples sent out for analysis. The process maintains the status of the unreturned samples to assist in follow-up of returned analyses. When the sample results are returned, the sample is marked as returned, and the person to whom the results are to be routed, if entered, is shown. At this time, the cost of the laboratory analysis may be entered. The process consists of the following two input transactions:

- Send Out Sample Data--When sending a sample out for analysis, the user enters the sample number, the laboratory destination, and the date results are due to be returned.

- Return Sample Results Data--Upon the receipt of results from a laboratory, the user must identify the sample, by number, to the system so the system will mark the sample as returned. The user, optionally, can enter what the laboratory charged to process the sample.

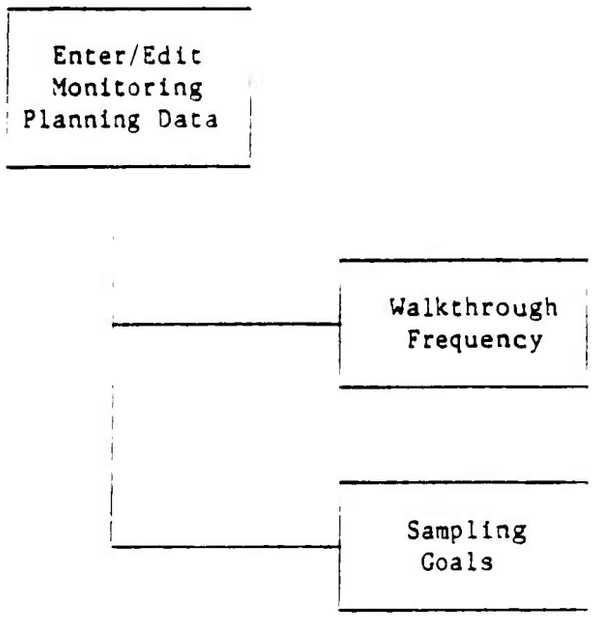

FIGURE 3-7

ENTER/EDIT MONITORING PLANNING DATA PROCESS

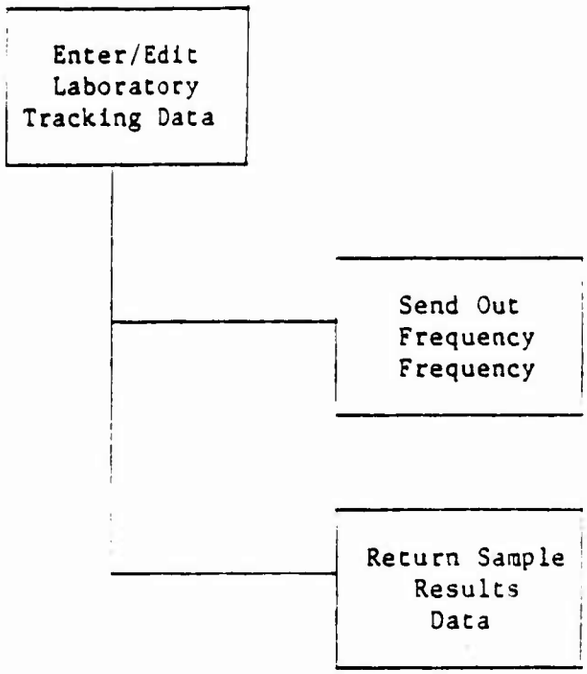

FIGURE 3-8

ENTER/EDIT LABORATORY TRACKING DATA PROCESS

3.11 Enter/Edit Survey Actions

The Enter/Edit Survey Actions input process (Figure 3-9) is used to maintain a tickler file for followup actions in the conduct of industrial hygiene surveys or for administrative duties. The process can be viewed as a scratch pad that is linked to an automated capability to remind the author of notes made based on a follow-up date entered. The two types of input that are part of this capability are the following:

- Survey Action Data--The Survey Action Form included in Appendix A shows the data that is entered for a survey action.

- Complete Survey Action Data--When the survey action is completed and the investigator does not wish to be reminded to follow-up, the survey action is "completed" by entry of a completion transaction.

3.12 Enter/Edit Exposure Notice Form Letters

The Enter/Edit Exposure Notice Form Letters input process enables the user to create form letters that are to be sent to employees when an exposure measurement indicates one of the following:

- An overexposure has occurred

- A lead sample has been taken

The Exposure Notice Form Letters file contains the text of each form letter. When letters are printed, specified data from the exposure module data base can be shown in the body of the letter, for instance, the employee's name and shop, the date of the sample, the stressor, its result and units, the location in which the sample was collected, and the operation being conducted. At the time the user enters the contents of the form letter into the system, a special syntax enables him or her to identify which data fields are to be "pulled" from the data base when the letter is printed and where these fields should appear in the text of the letter.

3.13 Enter/Edit Reference Tables

The Enter/Edit Reference Tables input process (Figure 3-10) is used to maintain the controlled vocabularies that are specific to the Exposure module. Specific input functions have been created which allow the user to modify the vocabularies as necessary during the system's life cycle.

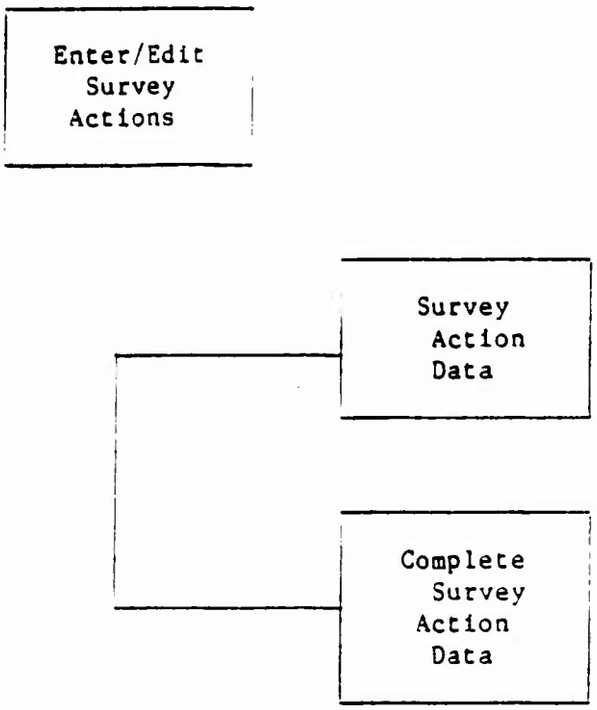

FIGURE 4-9

ENTER/EDIT SURVEY ACTIONS DATA PROCESS

The reference vocabularies are as follows:

- Laboratories--The list of outside laboratories to which samples are sent and tracked by the laboratory tracking function is set up in the Laboratory vocabulary.

- Frequency of Operations File--The frequency of operation field appears on the walkthrough survey form and on the industrial hygiene survey cover sheet. Values for the field may be modified by changing the frequency of operations vocabulary.

- Personal Protective Equipment--The codes and descriptions of the personal protective equipment in use are controlled by the personal protective equipment vocabulary.

- Respirators--The respirator code, description, TC number, and protection factor are contained in the respirators vocabulary.

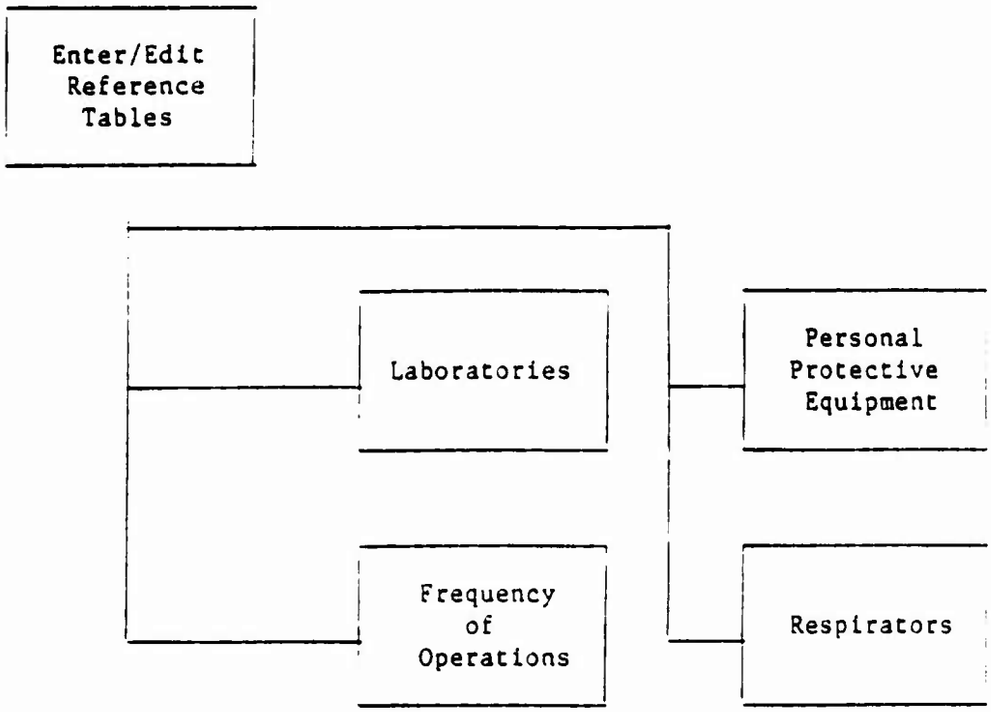

FIGURE 3-10

ENTER/EDIT REFERENCE TABLES DATA PROCESS

4.0 MODULE OUTPUT PROCESSES

4.1 Summary of Output Processes

The EE module contains many menu options which enable the user to obtain needed information from the module. These options can be grouped into processes, where each provides a specific type of information. The EE module contains the following output processes to display or print information:

- o Report Boundary Data
- o Report Equipment Data
- o Report Sampling Data
- o Report Ventilation Survey Data
- o Report Walkthrough Survey Data
- o Report Material Inventory Data
- o Report Material Composition
- o Report Monitoring Planning Data
- o Report Laboratory Tracking Data
- o Report Survey Actions
- o List Reference Tables

The following paragraphs describe in greater detail the outputs available from the EE module.

4.2 Report Boundary Data

The reports available under the Report Boundary Data process (Figure 4-1) include the following:

- o Boundary Status Report--The Boundary Status Report process allows the user to select the boundary status or statuses for which the report is desired and the date range for when the boundary number was assigned.

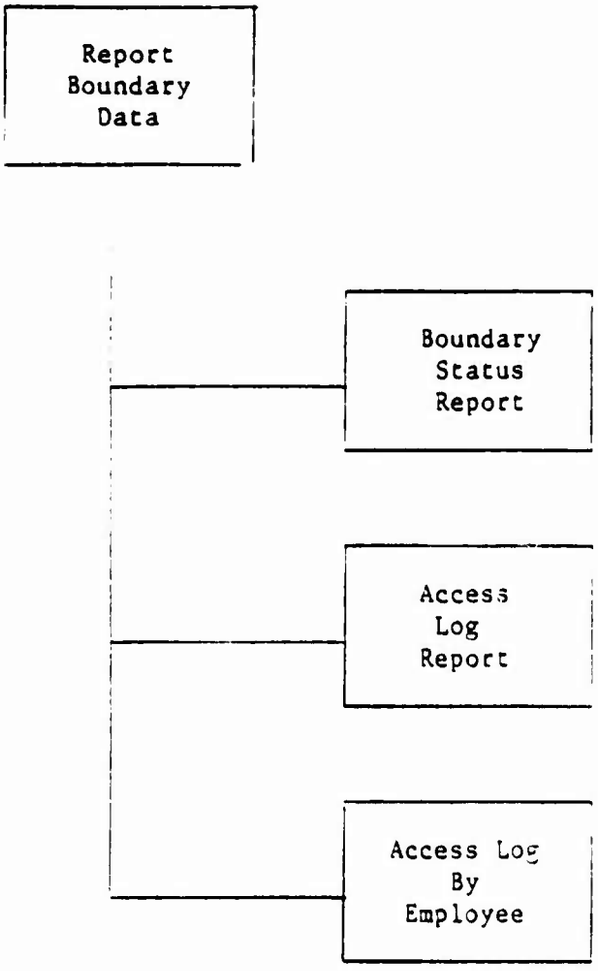

FIGURE 4-1

REPORT BOUNDARY DATA OUTPUT PROCESS

The report is then produced to show information descriptive of the boundary, e.g., location and operation, the workshifts for which records have been filed for the boundary, and the total manhours worked in the boundary.

- Access Log Report--The Access Log Report can be printed in either boundary number or stressor sequence. The report shows for each boundary the employees who have been in the boundary, their dates and times in, boundary, and a calculated number of days in boundary.

- Access Log by Employees Report--The Access Log by Employee Report shows, for a specified employee, the boundaries in which the employee has been, the stressors for which the boundaries were created, the dates and times the employees entered and exited the boundary, and the total hours in each boundary. A total days in boundary is calculated.

Examples of each output are shown in Appendix B.

4.3 Report Equipment Data

The reports available under the Report Equipment Data process (Figure 4-2) include the following:

- List Equipment Inventory--The Equipment Inventory Report allows the user to select a specific instrument type, manufacturer, or instrument code. The report then shows, for each instrument selected, all of the equipment description data and the calibration history for the instrument.

- List of Instruments Due for Calibration--The List of Instruments Due for Calibration can be selected by date range (for date due) and local storage location. The report shows, in date sequence, the equipment description data, the usual calibration agency data, and the date last calibrated.

Examples of each output are shown in Appendix C.

4.4 Report Sampling Data

The reports available under the Report Sampling Data process (Figure 4-3) include the following:

- Employee Exposure Reports--Employee Exposure Reports are available in a variety of sort sequences, as follows:

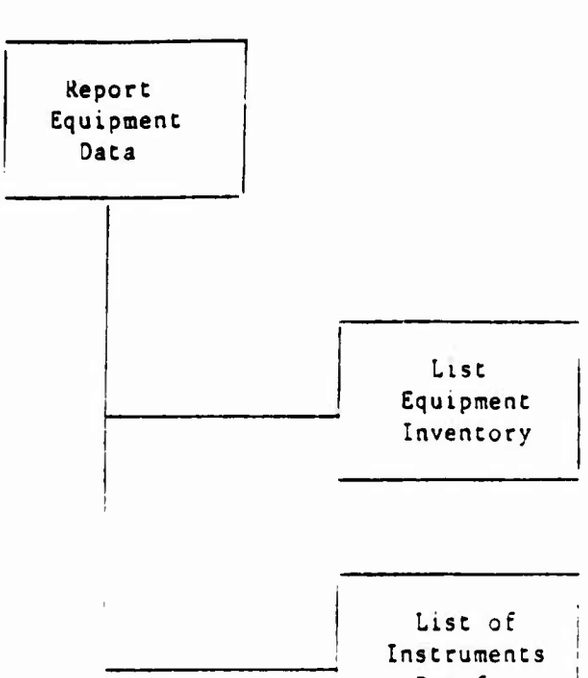

FIGURE 4-2

REPORT EQUIPMENT DATA OUTPUT PROCESS

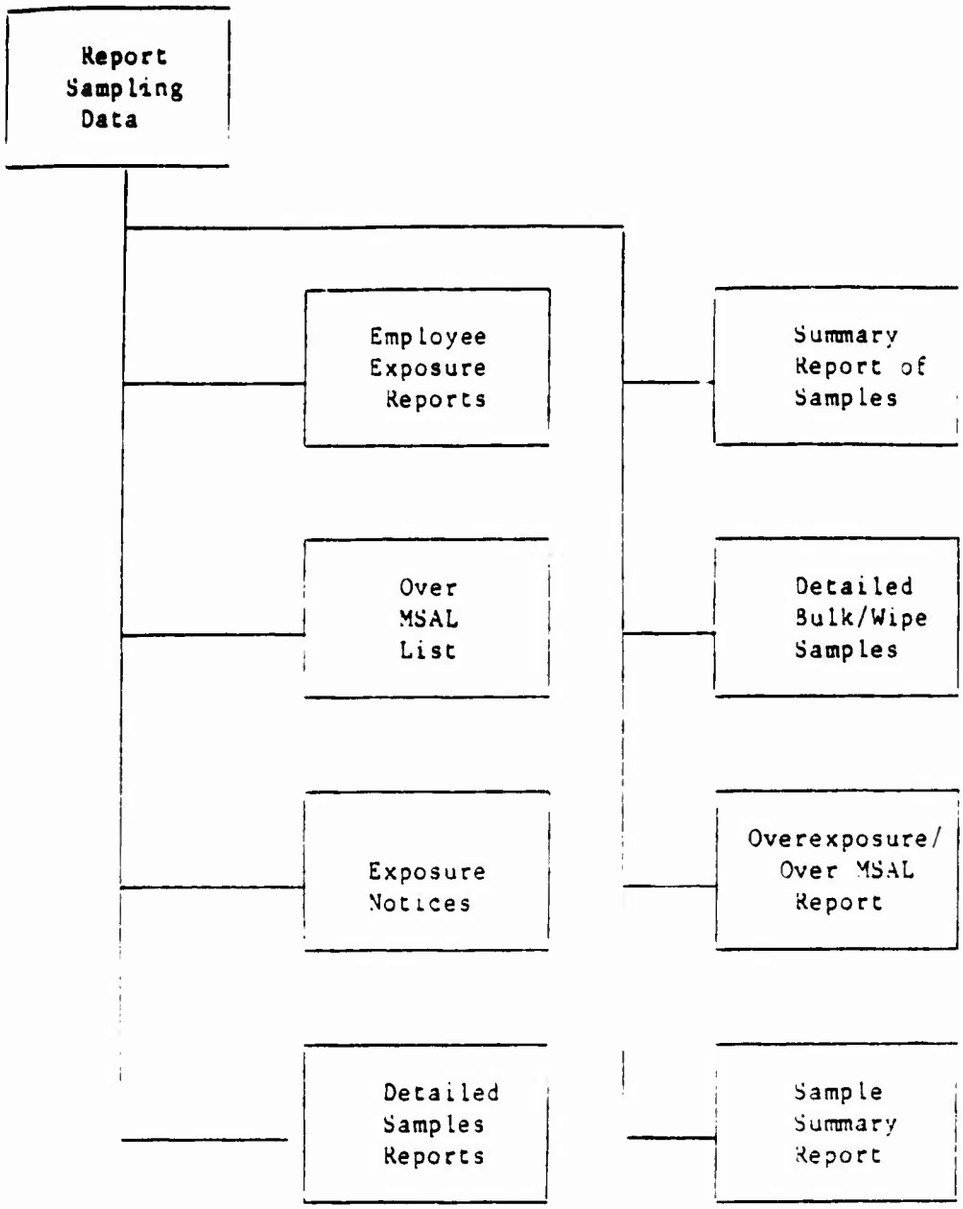

FIGURE 3-3

REPORT SAMPLING DATA OUTPUT PROCESS

-By employee name, sampled or in-area, stressor, date sampled, sample class (air, direct reading, noise, heat)

-By employee name, stressor, date sampled

-By stressor, date sampled, and employee name

-By employee agency, employee shop, employee name, date sampled, and stressor

The user may also select a group of exposures using any of the above specified sort fields. The report shows, for each selected employee: the employee's name, agency, shop, stressor, result type, and result, the location where the sample was collected, the survey number, document number, and page of the sample form.

- Over MSAL List--The Over MSAL List shows each newly entered sample result that is above any appropriate stressor limit. Each line on the report is assigned a number to identify the particular employee/stressor measurement: this line number is then used when exposure notices are created. For each employee/stressor measurement that is found to exceed a known limit, employee data is shown including: the person's current enrollment in medical programs; the survey number, document number, page of the sample form, and result; and the values of each limit that has been exceeded. An indicator along the right side of the report points out the measurements which are overexposures and those which are simply over MSAL.

- Exposure Notices--Exposure Notices are printable for any employee exposure reported on the Over MSAL List. The user may print a specified notice for a specific employee or may set up a number of notices of the same type to be printed as a batch. The contents of each notice type is definable at the local facility.

- Detailed Samples Reports--The Detailed Samples Report is available in the following sequences:

  -By activity location and date sampled

  -By activity, shop, stressor, and date sampled

  -By survey/boundary number and employee name

  -By location, stressor, and date sampled

  -By operation, stressor, and date sampled.

The user may select a group of samples to report based on the above sort criteria. The report includes all data entered for the air, direct reading, noise, and heatstress sample survey forms.

- Summary Report of Samples--The Summary Report of Samples allows the user to select the desired samples by stressor, location, operation, and date sampled. For each sample selected, the report shows the above data plus the document number and page of the survey form, sample class, sample type (personal or general area), result type, result, and units.

- Detailed Bulk/Wipe Samples--The Detailed Bulk/Wipe Samples Report is available in any of the following sequences:

  -By activity, location, and date sampled

  -By activity, shop sampled, stressor, and date sampled

  -By location, stressor, and date sampled

  -By operation, stressor, and date sampled

  The user may also select a group of bulk or wipe samples to print. The information shown on the report includes all of the data entered from the bulk or wipe sampling forms:

- Overexposure/Over MSAL Report--For a specific date range and site, this report shows by stressor and operation, or by stressor and location, a count of the number of samples taken, and the count and percent of those over each limit category i.e., MSAL, NAVY, PEL, TLV, Other. Totals are shown by stressor.

- Sample Summary Report--The Sample Summary Report is available by monitor or by stressor. For each of these options, the user may specify that the report is to show either all monitors/stressors or just a specific one. The report then contains a count of samples in each location by sample type (personal or general area) and result type (TWA, STEL, ceiling/peak, or other).

Examples of each output are shown in Appendix D.

4.5 Report Ventilation Survey Data

The report available under the Report Ventilation Survey Data process is the Ventilation Survey Report. The Ventilation Survey Report is available in a variety of sort sequences as follows:

- o By activity, location, and date surveyed
- o By activity, date surveyed, system ID, and source ID
- o By activity, location, investigation, and date surveyed

The user may also select a group of ventilation survey data based on the above criteria. The information on the report includes all data entered from the ventilation survey form. An example is shown in Appendix E.

4.6 Report Walkthrough Survey Data

The reports available under the Report Walkthrough Survey Data process (Figure 4-4) include the following:

- o Walkthrough Detail Report--The Walkthrough Detail Report may be selected by survey number or by location, operation, and date of survey. In the later case, the report may be sorted either by location, operation, and date or by operation, location and date. The report shows for each selected survey or part of a survey the survey number, location, operation, date range of the survey, surveyed shop, and all other data entered for a walkthrough.
- o Walkthrough Summary Report--The Walkthrough Summary Report allows the user to specify a date range for report generation. For each walkthrough survey begun during the date range, the report shows the survey number, the date range of the survey, whether the walkthrough was routine or special purpose, investigator(s), survey comment, and a list of each location and operation surveyed.
- o Survey Description List--The Survey Description List allows the user to select a survey by the survey number and shows the same data as is shown on the Walkthrough Summary Report.
- o Exposure Risk Report--The Exposure Risk Report is available sorted by location or by operation. The user may select the data to appear on the report by location, operation, and date. For each selected location, operation, and date surveyed, the report shows the exposure risk, need to sample, operation frequency and duration, number of persons in the operation, and the complete stressor list.
- o Locations by Stressor--The Locations by Stressor list is available to show the locations in which a stressor is found, the survey on which it was found, and the date of the survey.

Examples of each output are shown in Appendix F.

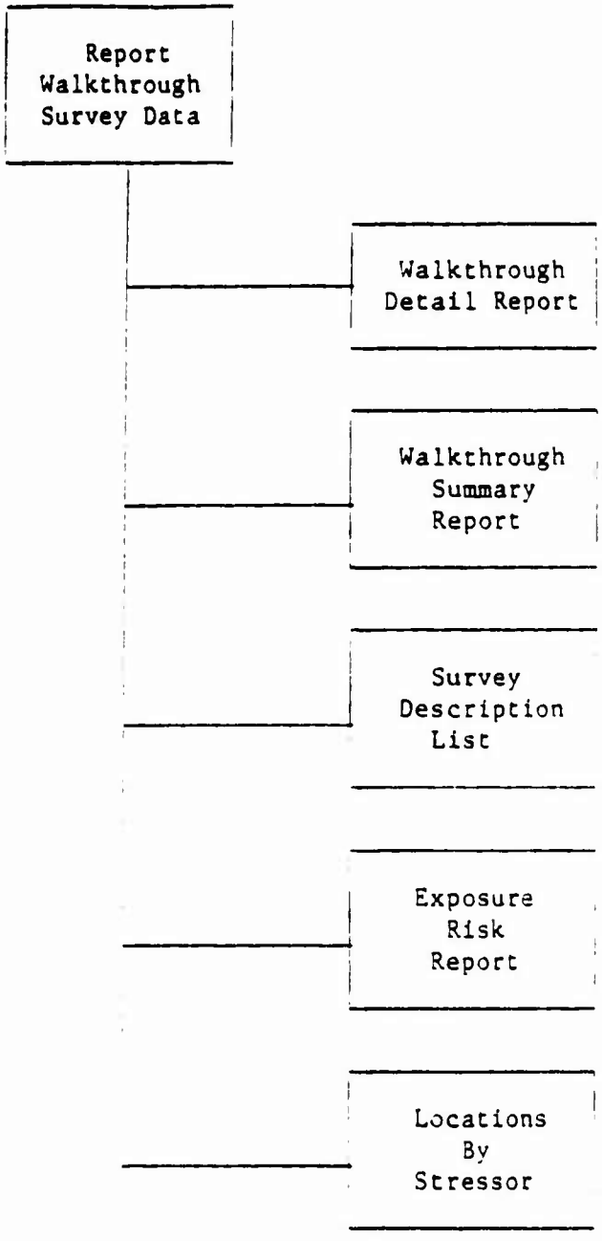

FIGURE 4-4

REPORT WALKTHROUGH SURVEY DATA OUTPUT PROCESS

4.7 Report Material Inventory Data

The reports available under the Report Material Inventory Data process (Figure 4-5) include the following:

- Material Inventory Report--The Material Inventory report is available by survey number or by date surveyed and location. For each selected set of material inventory data, the report shows the survey number, date surveyed, investigator(s), survey comment, location, shop surveyed, and for each material identified, the product's name, quantity and units.

- Material Location List--The Material Location List is available by material (product name) and date surveyed. The user may use (the standard procedure) to select a specific material. For each selected material, the report shows the location, survey number, type of survey (walkthrough or material inventory), and dates of the survey.

Examples of each output are shown in Appendix G.

4.8 Report Material Composition

The report available under the Report Material Composition process is the Exposure Materials List. The report contains the product trade name and synonyms, the stressors contained in the product, and selected information from each HMIS record which is related to the product. An example of the report is shown in Appendix H.

4.9 Report Monitoring Planning Data

The reports available under the Report Monitoring Planning Data process (Figure 4-6) include the following:

- Walkthroughs Due Report--The Walkthroughs Due Report is available by site. The user may also select the date range when the walkthrough must be due in order to appear on the report. A walkthrough is considered due based on the date of the last walkthrough and the walkthrough frequency. For each previously surveyed location/operation, the report shows the last survey number, the date of the last survey, the walkthrough frequency, shop surveyed, frequency and duration of the operation, and the number of persons.

- Walkthroughs Overdue Report--The Walkthroughs Overdue Report is also available by site. It shows the locations/operations for which walkthroughs have been due (based on the date of the last walkthrough and the walkthrough frequency) and not conducted. A

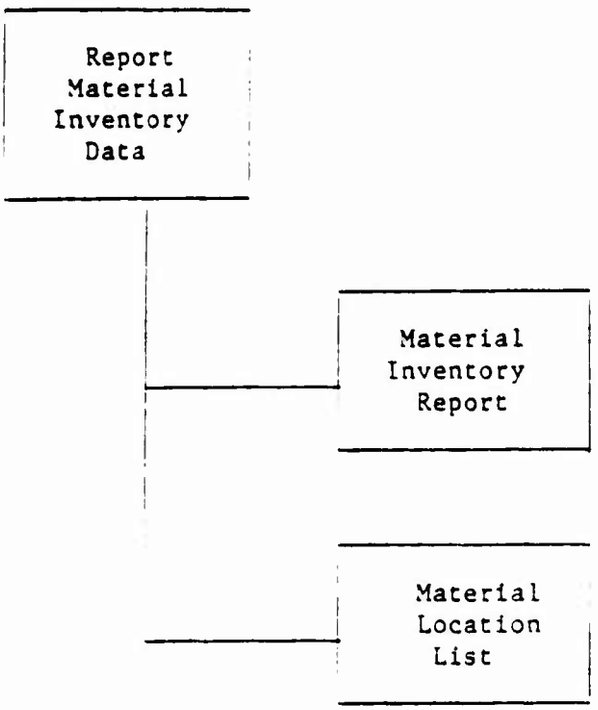

FIGURE 4-5

REPORT MATERIAL INVENTORY DATA OUTPUT PROCESS

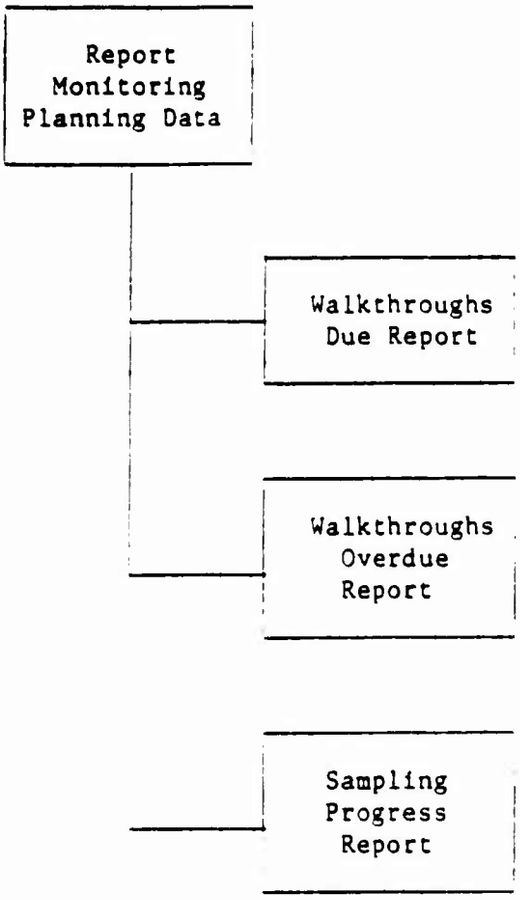

FIGURE 4-6

REPORT MONITORING PLANNING DATA OUTPUT PROCESS

seven-day grace period is given to allow for delays in the entry of walkthrough data. The information shown is the same as the above report. .

- o Sampling Progress Report--The Sampling Progress Report shows, for each location and operation that have specified sampling goals, the annual and overall goals for each stressor, the percent completed, other information required on the 5100/14 form, and the date last sampled.

Examples of each output are shown in Appendix I.

4.10 Report Laboratory Tracking Data

The reports available under the Report Laboratory Tracking Data process (Figure 4-7) include the following:

- o Outstanding Samples Report--The Outstanding Samples Report is available by laboratory. The report shows each sample that is still in a status of "Sent Out" in sequence by the date sent out. For each sample on the report, the sample number, survey number, date sent, date due, laboratory name, and sample report destination are shown.

- o Overdue Samples Report--The Overdue Samples Report is sorted by sample number. Each sample for which the date due precedes the report date and whose status is "SENT OUT" is shown on the report. The sample number, survey number, date sent, date due, laboratory name, and sample report destination are shown.

Examples of each output are show in Appendix J.

4.11 Report Survey Actions

The reports available under the Report Survey Actions process (Figure 4-8) include the following:

- o Survey Action Report--The Survey Action Report is available by agency, shop, follow-up date, location, operation, and investigator. The user may select from any or all of the above fields which survey actions are to appear on the report. The report shows, for each selected survey action the survey action number, status, dates (follow-up, completed, created), investigator, survey number, location, operation, shop, and description of the action to be taken.

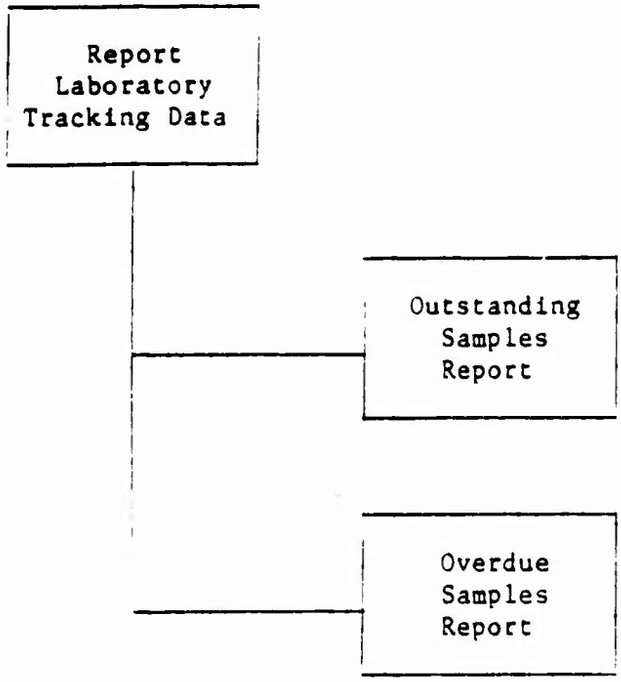

FIGURE 4-7

REPORT LABORATORY TRACKING DATA OUTPUT PROCESS

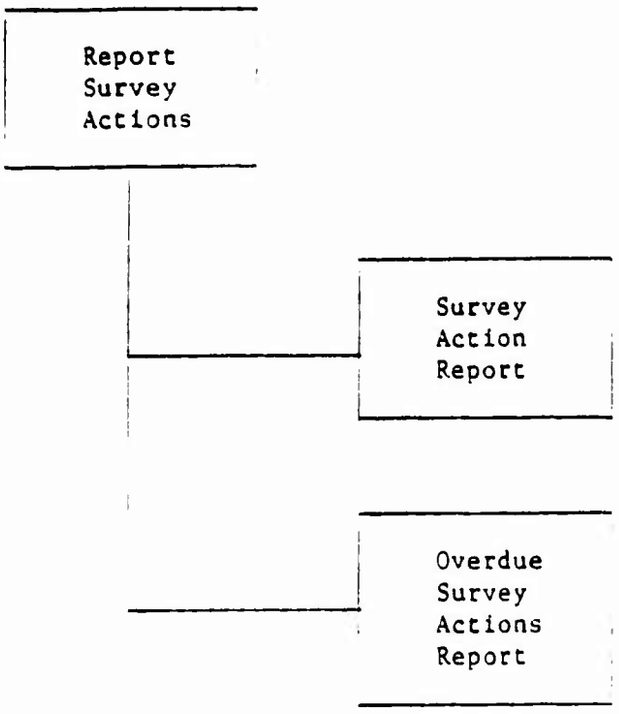

FIGURE 4-8

REPORT SURVEY ACTIONS OUTPUT PROCESS

- Overdue Survey Actions Report--The Overdue Survey Actions Report is available by follow-up date, investigator, and agency. The user may select the survey actions by any of these fields. The report shows for each selected survey action the same information as is shown in the Survey Action Report.

Examples of each output are shown in Appendix K.

4.12 List Reference Tables

The reports available under the List Reference Tables process allow the user to print the contents of any of the reference files that support the Exposure module. These files include the following:

- Collection Instrument Type
- Frequency of Operations
- Laboratories
- Personal Protective Equipment
- Respirators

APPENDIX A

EXAMPLES OF DATA INPUT FORMS

DATA INPUT FORMS

1. INDUSTRIAL HYGIENE SURVEY COVER SHEET
2. NOISE SURVEY FORM
3. AIR SAMPLE FORM
4. DIRECT READING SAMPLING SHEET
5. HEAT STRESS SAMPLING FORM
6. MATERIAL SURVEY FORM
7. VENTILATION SURVEY FORM
8. WALKTHROUGH SURVEY COVER SHEET
9. WALKTHROUGH SURVEY FORM
10. BULK SAMPLE FORM
11. WIPE SAMPLE FORM
12. BOUNDARY ACCESS LOG
13. SURVEY ACTION FORM

-99999

INDUSTRIAL HYGIENE SURVEY COVER SHEET

PTSMH-NMCL-6260/1 (NEW 11-86)

PAGE_____ OF_____

SURVEY/BOUNDARY #	CONTROL #

ACTIVITY/COMMAND:

TYPE OF SURVEY:

_____ 1. BASELINE _____ 2. INVESTIGATION

_____ 3. ROUTINE _____ 4. OTHER (SPECIFY) _____

_____ 5. FOLLOW-UP _____

DATE _____

INVESTIGATOR _____ AGENCY _____

ASSISTANT _____ AGENCY _____

TELEPHONE # _____

SITE	LOCATION	SUBLOCATION	AREA

OPERATION _____ SHOP #: _____ SHOP TEL#: _____ SUPERVISOR _____

SUPPORT SHOPS _____ # OF EMPLOYEES INVOLVED MALES _____ FEMALES _____

FREQUENCY OF OPERATION:	1. DAILY	2. 2-3 TIMES/WEEK	3. WEEKLY	4. 2-3 TIMES/MONTH
	5. MONTHLY	6. 1-3 TIMES/YEAR	7. YEARLY	8. SPECIAL OPERATION
DURATION:	1. LESS THAN 1 HR	2. 1-4 HRS	3. 5-8 HR	4. GREATER THAN 8 HRS

WEATHER CONDITIONS (TEMP. ETC.) _____

ENGINEERING CONTROLS IN USE	ADEQUATE ?	COMMENT
	____YES ____NO	
	____YES ____NO	
	____YES ____NO	
	____YES ____NO	

SURVEY ACTIONS FOLLOW-UP DATE

1. _____

2. _____

3. _____

4. _____

5. _____

SURVEY INCLUDES: ☐ AIR SAMPLING ☐ NOISE ☐ VENTILATION ☐ WALKTHROUGH

☐ OTHER

REVIEWED BY:	DATE:

NOISE SURVEY FORM
NMCL-PTSMH-6260/2 (NEW 12-86)

SURVEY/BOUNDARY #	CONTROL #
TYPE OF SAMPLE (PER/GA)	PAGE # _____ OF _____
COLLECTION INST 1	COLLECTION INST 2
EQUIPMENT LABELED ☐ YES ☐ NO ☐ N/A	AREA NOISE POSTED ☐ YES ☐ NO ☐ N/A

SAMPLING STRATEGY

( ) (1) FULL PERIOD, SINGLE ( ) (2) FULL PERIOD, CONSECUTIVE

( ) (3) PARTIAL PERIOD, SINGLE ( ) (4) PARTIAL PERIOD, CONSECUTIVE

( ) (5) SINGLE GRAB ( ) (6) MULTIPLE GRAB

( ) (7) CEILING ( ) (8) OTHER _____

EMPLOYEE NAME	BADGE #	SSN
AUDITORY PROTECTION CODE	DESCRIPTION	
ADEQ (Y/N)	COMMENTS:	

DOSIMETER SAMPLING DATA

TIME ON	TIME OFF	TIME ON	TIME OFF	TIME ON	TIME OFF	TOTAL TIME	LEQ DBA	LEQ PEAK	PEAK EXCEED (Y/N)	EXPIRE DT

TYPE OF NOISE: ( ) STEADY ( ) INTERMITTENT ( ) IMPACT/IMPULSE

WIND SCREEN: ( ) USED ( ) NOT USED

MEASUREMENTS OBTAINED: ( ) INDOORS ( ) OUTDOORS

SOUND LEVEL METER SAMPLING DATA

TIME OF DAY	MEASUREMENT	UNITS DBA DBC	METER RESPONSE	WORK PERIOD

NMCL-PTSMM-6260/2 (NEW 12-86) (BACK)

NOISE SOURCE

NOISE RADIUS

OTHER PERSONNEL REPRESENTED BY SAMPLING

NAME	EMPLOYEE ID	OPERATION	PPE	COMMENTS

CALIBRATION INFORMATION

DOSIMETER

PRE CALIBRATION

DATE _____ BATTERY CHECK _____

READOUT _____

CALIBRATION NAME _____ UNIT _____

POST CALIBRATION

DATE _____ BATTERY CHECK _____

READOUT _____

CALIBRATION NAME _____ UNIT _____

SOUND LEVEL METER			PRE CAL		POST CAL	
FREQUENCY	ALLOWABLE RANGE		DATE _____ BATT ( )		DATE _____ BATT	
	DBA	DBC	DBA	BC	DBA	
125 HZ						
250 HZ						
500 HZ						
1000 HZ						
2000 HZ						
			CALIBRATOR		CALIBRATOR	

DIAGRAM

CALCULATIONS

AIR SAMPLE FORM

NMCL-PTSMH-6260/3 (NEW 12-86)

SURVEY/BOUNDARY #	CONTROL #
TYPE OF SAMPLE (PER/GA)	PAGE # _____ OF _____
COLLECTION INST 1	INST 2

SAMPLING STRATEGY (CIRCLE ONE)

(1) FULL PERIOD, SINGLE
(2) FULL PERIOD, CONSECUTIVE
(3) PARTIAL PERIOD, SINGLE
(4) PARTIAL PERIOD, CONSECUTIVE
(5) SINGLE GRAB
(6) MULTIPLE GRAB
(7) CEILING
(8) OTHER _____

EMPLOYEE NAME	BADGE #	SSN #
RESPIRATOR CODE	RESPIRATOR DESCRIPTION	

PPE	CODE	USED	COMMENTS
AUDITORY			
EYE/FACE			
HAND			
FOOT			
CLOTHING			
OTHER			

SAMPLE INFORMATION

SAMPLE #					
LAB #					
MEDIA					
SIZE					
LOT #					
TIME OF STROKE					
TIME IN STROKE					
SAMPLE TIME					
FLOW RATE					
SAMPLE VOLUME					

ANALYTICAL METHOD AND LAB

ANALYTICAL RESULTS

NMCL-PTSMH-6260/3 (NEW 12-86) (BACK)

SAMPLING RESULTS	(TWA, CEIL, STEL)	RESULTS	UNITS	STANDARD	SOURCE

OTHER PERSONNEL REPRESENTED BY SAMPLING

EMPLOYEE NAME	BADGE	SSN	OPERATION CODE	RESP CODE	PPE USED

CALCULATIONS REVIEWED BY _____

PUMP CALIBRATION DATA

PUMP MFG	PUMP CODE	PRE 1	PRE 2	PRE 3	POST CAL	AVG FLOW RATE	CALIBRATE METHOD	CAL'D BY	DATE

COMMENTS _____

DIAGRAM

CALCULATIONS

DIRECT READING SAMPLING SHEET

NMCL-PTSMH-6260/4 (NEW 12-85)

SURVEY/BOUNDARY #	CONTROL #	PAGE #

TYPE OF SAMPLE (PER/GA)

COLLECTION INSTRUMENTS

1. _____
2. _____
3. _____

SAMPLING STRATEGY CIRCLE ONE

EMPLOYEE NAME | BADGE | SSN

RESPIRATOR CODE

PPE	TYPE
AUDITORY	
EYE/FACE	
HAND	
FOOT	
CLOTHING	
OTHER	

SAMPLE TUBE ID _____

SAMPLE # _____

LAB # _____

STRIKES _____

TIME IN _____

IN BOUNDARY _____

STRESSOR		

THESE EMPLOYEES REPRESENTED BY SAMPLING

EMPLOYEE NAME		

CALIBRATION

PRE CAL DATE	POST CAL DATE		

REVIEWED BY: _____

HEAT STRESS SAMPLING FORM

NMCL-PTSMH-6260/6 (NEW 12-86)

SURVEY/BOUNDARY #	CONTROL #

COLLECTION INSTRUMENT 1	INSTRUMENT 2

COMMENTS:

PPE	CODE	ADEQ (Y/N)	COMMENTS
AUDITORY			
EYE/FACE			
HAND			
FOOT			
CLOTHING			
OTHER			

RESULTS-INDICATE UNITS

PARAMETER	1	2	3	4	5	6	7	8	9	10	AVG
DRY BULB											
WET BULB											
% HUMIDITY											
GLOBE TEMP											
WBGT											
IN/OUTDOORS (I/O)											
RADIANT LOAD (Y/N)											

CONTROL MEASURES

WATER AVAIL (Y/N)											
WORK REST TIME											
OTHER											

OTHER EMPLOYEES

NAME	BADGE	SSN	OPERATION CODE	RESPIR CODE	

DIAGRAM

DATA REVIEWED BY:

MATERIAL SURVEY FORM
NMCL-PTSMH-6260/11 (NEW 12-86)

WALKTHROUGH SURVEY # _____

LOCATION: SITE/LOCATION/SUBLOCATION/AREA

MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
MATERIAL NAME	QUANTITY	UNITS
STRESSOR	STRESSOR	
PERSON PERFORMING SURVEY	BASE	DATE

VENTILATION SURVEY FORM

NMCL-PTSMH-5260/5 (NEW 12-86)

SURVEY/BOUNDARY #

CONTROL #

DATE:

PAGE _____ OF _____

INVESTIGATOR

AGENCY

ASSISTED BY

AGENCY

SITE

LOCATION

SUBLOCATION

AREA

OPERATION CODE

OPERATION DESCRIPTION

STRESSORS INVOLVED

SHOP

SHOP TEL #

SUPERVISOR

COLLECTION INSTRUMENT 1

INSTRUMENT 2

SURVEY COMMENTS:

VENT SYSTEM ID

DESCRIPTION

VENT SYSTEM: ☐ PERMANENT ☐ TEMPORARY

VENT SOURCE ID

DESCRIPTION

VENT SOURCE: ☐ PERMANENT ☐ TEMPORARY

BLAST GATE DAMPER POSITION:

☐ 1/4 OPEN ☐ 1/2 OPEN ☐ 3/4 OPEN ☐ FULL OPEN

DUCT DIAMETER

PROBE/DUCT AREA

MEASUREMENTS

PROBE	DUCT VELOCITY (FPM)				
1					
2					
3					
4					
5					
6					
				< VELOCITY	
				< AIR FLOW RATE	
				< FLOW RATE STD	

SYSTEM STATUS: ☐ SATISFACTORY ☐ UNSATISFACTORY ☐ N/A

NMCL-PTSMH-6260/5 (NEW 12-86) (BACK)

DIAGRAM:

CALCULATION:

CALCULATIONS REVIEWED BY:

WALKTHROUGH SURVEY COVER SHEET
NMCL-PTSMH-6260/9 (NEW 12-86)

WALKTHROUGH SURVEY #

TYPE OF WALKTHROUGH: ☐ (1) WALKTHROUGH

☐ (2) MATERIAL INVENTORY

☐ (3) OTHER

☐ (1) ROUTINE

☐ (2) SPECIAL REASON

SPECIAL WALKTHROUGH REASON:

DATE STARTING FROM:

DATE ENDING ON:

INVESTIGATOR:	AGENCY:	UIC:
ASSISTANT:	AGENCY:	UIC:

SURVEY COMMENT:

WALKTHROUGH SURVEY FORM
NMCL-PTSMH-6260/10 (NEW 12-86)

WALKTHROUGH SURVEY: _____

LOCATION: SITE/LOCATION/SUBLOCATION/AREA

OPERATION CODE:	OPERATION DESCRIPTION:
SHOP:	IN AGENCY:
FREQUENCY OF OPERATION: ☐ (1) DAILY ☐ (3) WEEKLY ☐ (5) MONTHLY ☐ (7) YEARLY	☐ (2) 2-3 TIMES WEEK DURATION: ☐ (4) 2-3 TIMES MONTH ☐ (6) 2-3 TIMES YEAR ☐ (8) OTHER _____ ☐ (1) LESS THAN ☐ (2) 1-2 HRS ☐ (3) 3-8 HRS ☐ (4) GT 8 HRS
NEED TO SAMPLE ☐ YES ☐ NO	EXPOSURE RISK: (1) NEGLIGIBLE (2) MARGINAL (3) IMMINENT (4) CRITICAL

NO EXPOSURE RISK REASON:

OPERATION COMMENT: _____

MACHINERY:

PHYSICAL HAZARD	[illegible]	[illegible]	COMMENTS
1			
2			
3			

COMMENTS

ENGINEERING CONTROLS IN USE	[illegible]	COMMENTS

COMMENTS:

[illegible] IN USE	[illegible]	COMMENTS

COMMENTS:

RESP PROT IN USE	[illegible]	COMMENTS

COMMENTS:

PPE IN USE	[illegible]	COMMENTS

COMMENTS:

BULK SAMPLE FORM

AMC_-PTSMH-6260/7 (NEW 12-86)

SURVEY/BOUNDARY #	CONTROL #	PAGE #

SOURCE OF SAMPLE:

CONTAINER LABEL:

SAMPLE #:

LAB #:

STRESSORS	[illegible]	AMOUNT [illegible]	AMOUNT [illegible]

IN OR OUT OF BOUNDARY AREA (CIRCLE) ☐ ☐

TYPE OF LAB ANALYSIS REQUESTED:

NAME OF ANALYTICAL LAB:

INVESTIGATOR'S NAME:

DATE SAMPLED COLLECTED:

WIPE SAMPLE SHEET

NMCL-PTSMH-6260/8 (NEW 12-86)

SURVEY/BOUNDARY #	CONTROL #	PAGE #

SOURCE OF SAMPLE:

COLLECTION MEDIA:

SAMPLING COMMENTS:

TYPE OF ANALYSIS REQUESTED

NAME OF ANALYTICAL LAB

SAMPLE #:

LAB #:

IN/OUT BOUND

WIPE AREA

STRESSORS	AMT UNITS	AMT UNITS	AMT UNITS	AMT UNITS	AMT UNITS

REVIEWED BY:

BOUNDARY ACCESS LOG

NMCL-PTSMH-6260/12 (NEW 12-86)

BOUNDARY #	LEAD SHOP	LOCATION BLDG/SHIP	SHIFT RECORD DATE	WORK PROCEDURE NUMBER	TYPE OF CONTROL
					☐ ISOLATION ☐ CONTROLLED

SHIFT	SUPERVISOR (PRINT):	RECEIVED CK LIST	ALL PERSONS ENTERING AND EXITING SHALL ENTER FOLLOWING INFORMATION BELOW: NAME, SSN, CODE/SHOP, DATE TIME IN/OUT, RESPIRATOR CODE, OPER CODE & INITIALS
1 ☐ DAY 2 ☐ EVE 3 ☐ NITE		☐ YES ☐ NO	

NAME (LAST NAME INITIALS)	BADGE #/ SSN	CODE/ SHOP	RESP CODE	OPER CODE	TIME IN	TIME OUT	TIME IN	TIME OUT	TIME IN	TIME OUT

SUPERVISOR'S SIGNATURE:

NOTE: BEGIN NEW LOG EACH SHIFT, EACH DAY.

SURVEY ACTION FORM

NMCL-PTSMH-6260/13 (NEW 12-86)

SURVEY ACTION #:

WALKTHROUGH/SURVEY #:

LOCATION:	OPERATION:
SHOP:	IN AGENCY:

INVESTIGATOR:

DESCRIPTION:

FOLLOWUP DATE:	COMPLETION DATE:

APPENDIX B

EXAMPLES FROM REPORT BOUNDARY DATA OUTPUT PROCESS

85-0001-RJJ ASBESTOS GLOVE BAG
ASSIGNED: 21 NOV 85
LOCATION:
SHOP: 026 IN AGENCY: PTSMH
SUPERVISOR: KIL-ROY,RICKY
STATUS: CLOSED WORK PROCEDURE!
ESTABLISHED: 22 NOV 83 DISESTABLISHED: 6 JUN 86
SHIFT: DAY SHIFT: DAY
WORKSHIFTS:

DATE	SHIFT	SUPERVISOR	CHKLST	ACCESS LOG
6 APR 86	DAY	CRAFFORD,J. CARTER,JR.	YES	28604061
19 NOV 85	DAY	CRAFFORD,J. CARTER,JR.	NO	28511190
5 APR 85	DAY	CRAFFORD,J. CARTER,JR.	YES	28504051

TOTAL MANHOURS: 34.17

ACCESS LOG BY BOUNDARY

AUG 15,1986 11:08 PAGE 1

EMPLOYEE	BOUNDARY ID NUMBER	STRESSOR	DATE/TIME IN	MINUTES		
FIDDLEMAN,RICHARD	85-0001-BJJ	ASB	19 NOV 85@08:15	250		
			TOTAL HOURS:	4.17	NUMBER OF DAYS:	1
SUBTOTAL						1
HAMILTON,DIANNA M.	85-0002-BJJ	ASB	24 DEC 85@07:15	315		
			24 DEC 85@13:30	150		
			TOTAL HOURS:	7.75	NUMBER OF DAYS:	1
SUBTOTAL						1
JACOBS,BUNNY	85-0001-BJJ	ASB	5 APR 85@17:00	70		
			5 APR 85@14:00	60		
			5 APR 85@18:00	60		
			5 APR 85@19:10	230		
			TOTAL HOURS:	7.00	NUMBER OF DAYS:	1
	85-0002-BJJ	ASB	24 DEC 85@06:00	125		
			TOTAL HOURS:	2.08	NUMBER OF DAYS:	1
SUBTOTAL						2
JAMES,BARBARA J	86-0001-MN	ASB	5 JAN 86@06:49	121		
			5 JAN 86@13:00	120		
			5 JAN 86@15:15	5		
			TOTAL HOURS:	4.10	NUMBER OF DAYS:	1
SUBTOTAL						1
KILROY,RICARDO	85-0001-BJJ	ASB	5 APR 85@04:00	960		
			TOTAL HOURS:	16.00	NUMBER OF DAYS:	2
SUBTOTAL						2
PIE,HUMBLE	85-0001-BJJ	ASB	19 NOV 85@13:00	135		
			1 JAN 86@23:15	105		
			2 JAN 86@03:00	180		
			TOTAL HOURS:	7.00	NUMBER OF DAYS:	3
	[illegible]	ASB	24 DEC 85@07:15	180		
			[illegible]	[illegible]		
			TOTAL HOURS:	6.05	NUMBER OF DAYS:	1

EMPLOYEE
BOUNDARY ID NUMBER STRESSOR

BARNETT,GAIL SSN: 000000028 BADGE: 38032 SHOP: 923 IN: MINS
B86-0004-MN ASB 14 AUG 86 SHIFT: 1
RESP: SAH SUPPLIED AIR HOOD
OPER: TA009 THERMAL INSULATION,ASBESTOS,CRAWL SPACES
IN: 12:00 OUT: 12:35 MIN: 35
IN: 13:00 OUT: 14:50 MIN: 110
TOTAL HOURS: 2.42 DAYS: 1

SUBTOTAL 1

GILLIS,BOBIE SSN: 000000038 BADGE: 34146 SHOP: 931 IN: MINS
B86-0004-MN ASB 14 AUG 86 SHIFT: 1
RESP: SAH SUPPLIED AIR HOOD
OPER: TA009 THERMAL INSULATION,ASBESTOS,CRAWL SPACES
IN: 09:00 OUT: 13:00 MIN: 240
IN: 13:45 OUT: 15:00 MIN: 75
TOTAL HOURS: 5.25 DAYS: 1

SUBTOTAL 1

ISABORA,FIA SSN: 000234567 BADGE: 00096 SHOP: TERM IN: NSMI
B86-0005-MN ASB 8 AUG 86 SHIFT: 2
RESP: HFF HALF FACE, PESTICIDE
OPER: SHF001 SHAPING OFS,FILING,FILING
IN: 14:14 OUT: 14:37 MIN: 23
IN: 16:30 OUT: 16:51 MIN: 21
IN: 19:19 OUT: 22:11 MIN: 172
TOTAL HOURS: 3.60 DAYS: 1

SUBTOTAL 1

JONES,MARK SSN: 552116666 BADGE: 567345 SHOP: 926 IN: MINS
B86-0004-MN ASB 15 AUG 86 SHIFT: 1
RESP: SAH SUPPLIED AIR HOOD
OPER: TA005 THERMAL INSULATION,ASBESTOS,CLEANUP
IN: 07:00 OUT: 08:50 MIN: 110
IN: 09:30 OUT: 10:00 MIN: 30
IN: 11:00 OUT: 14:50 MIN: 230
TOTAL HOURS: 6.17 DAYS: 1

SUBTOTAL 1

APPENDIX C

EXAMPLES FROM REPORT EQUIPMENT DATA OUTPUT PROCESS

	MANUFACTURER / MODEL	SERIAL NUMBER	CODE
AIR SAMPLING PUMP	HOHUM / 6767	7654333	HHT

LOCATION: NRF
METHOD OF CALIBRATION:
DATE NEXT CALIBRATION: JUL 87
DATE LAST CALIBRATION: 24 JUL 86
USUAL CALIBRATION DONE BY:
NAVY CAL LAB - CHARLESTON
DAYS: COST:

CALIBRATIONS:

DATE	AGENCY	COST	DAYS
24 JUL 86	NAVY CAL LAB - CHARLESTON	35.00	1

	MANUFACTURER / MODEL	SERIAL NUMBER	CODE
AIR SAMPLING PUMP	MSA / 800	788455	RJ3

LOCATION: OSH LAB - HERNDON
METHOD OF CALIBRATION:
DATE NEXT CALIBRATION:
DATE LAST CALIBRATION:
USUAL CALIBRATION DONE BY:

DAYS: COST:

CALIBRATIONS:

DATE	AGENCY	COST	DAYS

	MANUFACTURER / MODEL	SERIAL NUMBER	CODE
AIR SAMPLING PUMP	MSA / 2125	987622209	RJ4

LOCATION: OSH LAB - HERNDON
METHOD OF CALIBRATION: MANUFACTURER
DATE NEXT CALIBRATION: DEC 86
DATE LAST CALIBRATION: 10 JUN 86
USUAL CALIBRATION DONE BY:
MSA
YUPPIE,IMA
703-777-7777
703-777-7000/567
DAYS: 13 COST: 23.00

CALIBRATIONS:

DATE	AGENCY	COST	DAYS
10 JUN 86	NAVY CAL LAB - CHARLESTON	24.00	12
3 DEC 85	MSA	23.00	10

19 DEC 85
CODE: N13 NOISE DOSIMETER
GENRAD
01234
567884443
LOCATION: OSH OFFICE
USUAL CONTACT: JOHN DOE
PHONES: 404-678-9999 /678
DAYS: 21 USUAL AGENCY: METCAL
LAST CALIBRATED: LAST AGENCY:

MAR 86
CODE: TST1 JACOBS METER
BORG-WARNER
345
1234567890
LOCATION: OSH OFFICE
USUAL CONTACT: 1
PHONES:
DAYS: USUAL AGENCY: NAVY CALIBRATION SERVICE
LAST CALIBRATED: 21 NOV 85LAST AGENCY: NAVY CALIBRATION SERVICE

DEC 86
CODE: BJ4 AIR SAMPLING PUMP
MSA
2125
987622209
LOCATION: OSH LAB - HERNDON
USUAL CONTACT: YUPPIE,IMA
PHONES: 703-777-7777
703-777-7000/567
DAYS: 13 USUAL AGENCY: MSA
LAST CALIBRATED: 10 JUN 86LAST AGENCY: NAVY CAL LAB - CHARLESTON

JAN 87
CODE: BJ7 HYGROMETER
HALLIBURTON
500
7777777
LOCATION: OSH OFFICE
USUAL CONTACT: TED TURNER
PHONES: 703-333-4444
DAYS: 35 USUAL AGENCY: NAVY CAL LAB - CHARLESTON
LAST CALIBRATED: 26 JUN 86LAST AGENCY: NAVY CAL LAB - CHARLESTON

10 JAN 87
CODE: G10 AIR SAMPLING PUMP
MSA
2150
1234567890
LOCATION: OSH LAB
USUAL CONTACT: KEN GUKU
PHONES: 2101
DAYS: 7 USUAL AGENCY: METCAL
LAST CALIBRATED: 10 JAN 86LAST AGENCY: METCAL

10 JAN 87
CODE: B08 AIR SAMPLING PUMP
MSA
6666666

APPENDIX D

EXAMPLES FROM REPORT SAMPLING DATA OUTPUT PROCESS

CRAFFORD,J. CARTER,JR. SHOP: 340 AGENCY: LBNSY
B86-0001-TST 92222/2 DATE SAMPLED: 15 MAR 86 SAMPLED/IN AREA: SAMPLED
LOC: MARE,B906,RELAY ROOM

NOISE	NOISE	TWA	93.000	DBA
NOISE	NOISE	PEAK	88.000	DBA
NOISE	NOISE	OTHER	105.000	PERCENT

CRAWFORD,JOAN SHOP: 038 AGENCY: PTSMH
B86-0001-TST 92227/1 DATE SAMPLED: 21 APR 86 SAMPLED/IN AREA: IN AREA
LOC: SD,SS FARRAGUT,DECK 2A

NOISE	NOISE	TWA	82.000	DBA
NOISE	NOISE	PEAK	89.000	DBA
NOISE	NOISE	OTHER	86.000	PERCENT
NOISE	NOISE	PEAK	84.000	DBA
NOISE	NOISE	PEAK	92.000	DBC
NOISE	NOISE	PEAK	87.000	DBA
NOISE	NOISE	PEAK	94.000	DBC
NOISE	NOISE	PEAK	45.000	DBC

DOE, JOHN SHOP: 931 SUPERVISOR JOB TITLE
B86-0001-TST 92227/5 DATE SAMPLED: 21 APR 86 SAMPLED/IN AREA: SAMPLED
LOC: SD,SS FARRAGUT,DECK 2A

BENZENE	AIR	TWA	8.000	MG/M3
BENZENE	AIR	PEAK	78.000	MG/M3

B86-0001-TST 92227/5 DATE SAMPLED: 21 APR 86 SAMPLED/IN AREA: SAMPLED
LOC: SD,SS FARRAGUT,DECK 2A

DUST	AIR	TWA	400.000	PPM

B86-0001-TST 92227/5 DATE SAMPLED: 21 APR 86 SAMPLED/IN AREA: SAMPLED
LOC: SD,SS FARRAGUT,DECK 2A

FLUOROCARBON POLYMERS (DECOMPOSITION PRODUCTS OF)	AIR	TWA	700.000	PPM

FIDDLEMAN,RICHARD SHOP: 011 TEST OCCUPATION TITLE
B86-0001-TST 92224/1 DATE SAMPLED: 20 MAR 85 SAMPLED/IN AREA: IN AREA
LOC: MARE,SSN 696,ULER

BENZENE	AIR	TWA	68.000	MG/M3

B86-0001-TST 92225/1 DATE SAMPLED: 31 MAR 86 SAMPLED/IN AREA: IN AREA
LOC: MARE,B100,SPRAYING TANK

BENZENE	AIR	TWA	4.000	MG/M3

B86-0001-TST 92229/1 DATE SAMPLED: 22 JUN 86 SAMPLED/IN AREA: SAMPLED
LOC: MARE,B100,PAINT SHED

BENZENE	AIR	TWA	78.000	MG/M3

B86-0001-TST 92229/1 DATE SAMPLED: 22 JUN 86 SAMPLED/IN AREA: SAMPLED
LOC: MARE,B100,PAINT SHED

LEAD,INORGANIC	AIR	TWA	101.000	MG/M3

[illegible] SHOP: 120 LABORER
[illegible] DATE SAMPLED: 20 MAR 86 SAMPLED/IN AREA: SAMPLED
[illegible]

AARDVARK,JOE BADGE: 609100 SSN: 221446601 AUG 6,1951 MALE
MINS SHOP: 134 OCC: W03703
WELDING

LOCATIONS:

CODE		MEDICAL PROGRAM NAME	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	NOT QUALIFIED	JUL 28,1986
09	R	HEARING	NOT QUALIFIED	JUL 28,1986
10	P	HYDROCARBONS		AUG 6,1986
14	R	NICKEL	NOT QUALIFIED	JUL 28,1986
40	R	RESPIRATORY PROTECTION	NOT QUALIFIED	JUL 28,1986
25	P	SOLVENTS		AUG 6,1986
38	R	VISION (NEAR VISION)	NOT QUALIFIED	JUL 28,1986
47	R	WELDERS EXAM	NOT QUALIFIED	JUL 28,1986
33	P	BENZENE		AUG 6,1986

JUL 24,1986 S86-0008-MN 88898/3
MI,BLDG360,RM20
QFOV QUARTER FACE, ORGANIC VAPOR

		RESULT		UNITS	SAMPLED MSAL	NAVY	PEL	TLV	OTHER	
86-1000005										
ASHPALT FUMES	TWA	200		MG/M3	20	30	30	40	N/A	OVER MSAL

AARDVARK,JOE BADGE: 609100 SSN: 221446601 AUG 6,1951 MALE
MINS SHOP: 134 OCC: W03703
WELDING

LOCATIONS:

CODE		MEDICAL PROGRAM NAME	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	NOT QUALIFIED	JUL 28,1986
09	R	HEARING	NOT QUALIFIED	JUL 28,1986
10	P	HYDROCARBONS		AUG 6,1986
14	R	NICKEL	NOT QUALIFIED	JUL 28,1986
40	R	RESPIRATORY PROTECTION	NOT QUALIFIED	JUL 28,1986
25	P	SOLVENTS		AUG 6,1986
38	R	VISION (NEAR VISION)	NOT QUALIFIED	JUL 28,1986
47	R	WELDERS EXAM	NOT QUALIFIED	JUL 28,1986
33	P	BENZENE		AUG 6,1986

JUL 24,1986 S86-0008-MN 88898/3
MI,BLDG360,RM20
QFOV QUARTER FACE, ORGANIC VAPOR

		RESULT		UNITS	SAMPLED MSAL	NAVY	PEL	TLV	OTHER	
86-1000030										
ASHPALT FUMES	TWA	200		MG/M3	20	30	30	40	N/A	OVER MSAL

AARDVARK,JOE BADGE: 609100 SSN: 221446601 AUG 6,1951 MALE
MINS SHOP: 134 OCC: W03703
WELDING

LOCATIONS:

CODE		MEDICAL PROGRAM NAME	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	NOT QUALIFIED	JUL 28,1986
09	R	HEARING	NOT QUALIFIED	JUL 28,1986
10	P	HYDROCARBONS		AUG 6,1986
14	R	NICKEL	NOT QUALIFIED	JUL 28,1986
40	R	RESPIRATORY PROTECTION	NOT QUALIFIED	JUL 28,1986
25	P	SOLVENTS		AUG 6,1986

DETAILED SAMPLES REPORT BY ACTIVITY/LOCATION/DATE

SURVEY/BOUNDARY NUMBER: 86-0002-BJJ ACTIVITY: ALLOK

DOCUMENT NUMBER: 33333
DATE: 22 APR 86

TYPE: OTHER TYPE=OTHER
INVESTIGATOR: HEALY,MARTEEE UIC:
ASSISTANT: GOOFY,HYGIENIST UIC: 00987

LOCATION: SD,SS FARRAGUT,DECK 2A
OPERATION: IF001 THERMAL INSULATION,FIBERGLASS,SHIPBOARD
SHOP: 201 IN AGENCY: ALLOK
TEL: 6666 SUPERVISOR: CRAFFORD,J. CARTER,JR.
OP FREQ: 2-3 TIME/YEAR DURATION: 1-4 HOURS

COMMENT:
THIS SURVEY STINKS

ENGINEERING CONTROL ADEQUATE?
YES

FACE SHIELD
THIS CONTROL IS ADEQUATE

PAGE: 1 SAMPLE CLASS: AIR
TYPE: PERSONAL
STRATEGY: PARTIAL PERIOD SINGLE SAMPLE

COLLECTION INSTRUMENT(S):
AIR SAMPLING PUMP BJ3
MSA 788455

EMPLOYEE	SAMPLED/ IN AREA	RESP	OPERATION	PPE
HUMBLE,HUBBA	SAMPLED	RESP1	**	
FIL,HUMBLE	IN AREA	RESP1	THERMAL INSULATION,FIBERGLASS,SHIPBOARD	NMP09
			NO MFAKING PROTECTION	ADEQUATE? NO
			COMMENT: NO PROTECTION	

STRESSOR	TYPE	RESULT	UNITS
BENZENE	TWA	10.000	PPM
LEAD (INORGANIC)	TWA	45.000	MG/M3
FLUORIDES	PEAK	56.000	
ORGANIC TIN COMPOUNDS	CEILING	109.000	PPM

SUMMARY REPORT OF SAMPLES

DATE	DOC #	PAGE	CLASS	TYPE	RES	RESULT	UNIT

STRESSOR: BENZENE

LOC: MARE,B100,PAINT SHED

OPER: ZB002 MISCELLANEOUS,CLEAN-UP,CLEANUP

JUN 22,1986	92229	1	AIR	PER	TWA	78	MG/M3

LOC: MARE,B100,SPRAYING TANK

OPER: TF019 THERMAL INSULATION,FIBERGLASS,SAWING

MAR 31,1986	92225	1	AIR	PER	TWA	4	MG/M3

LOC: MARE,B906,RELAY ROOM

OPER: SOLB003 SOLID OPS,BALLAST,FORKLIFT

MAR 15,1986	92222	1	AIR	PER	TWA	45	MG/M3

LOC: MARE,SSN 696,ULER

OPER: SHM001 SHAPING OPS,MACHINING,LATHEING

MAR 20,1985	92224	1	AIR	PER	TWA	68	MG/M3

LOC: MARE,SSN 696,ULER,TURBINE 2

OPER: TF011 THERMAL INSULATION,FIBERGLASS,INSTALLING PADS

MAR 20,1986	92223	2	AIR	PER	TWA	43	MG/M3

LOC: NS,B100

OPER: TA001 THERMAL INSULATION,ASBESTOS,ANALYTICAL LAB

JUL 23,1986	99999	1	AIR	PER	TWA	60	MG/M3

LOC: SD,SS FARRAGUT,DECK 2A

OPER: TA008 THERMAL INSULATION,ASBESTOS,CORE SAMPLING

APR 21,1986	92227	5	AIR	PER	TWA	8	MG/M3
					PEAK	78	MG/M3

LOC: SD,SS FARRAGUT,DECK 2A

OPER: TF001 THERMAL INSULATION,FIBERGLASS,SHIPBOARD

APR 22,1986	33333	1	AIR	PER	TWA	10	PPM

STRESSOR: CHROMATES

LOC: DC,B403,UNDER RUG

OPER: ZB002 MISCELLANEOUS,CLEAN-UP,CLEANUP

MAY 29,1986	33333	1	AIR	PER	TWA	10.1	PPM

STRESSOR: CHROMIUM

LOC: MARE,B100,PAINT SHED

OPER: ZB002 MISCELLANEOUS,CLEAN-UP,CLEANUP

JUL 31,1985	22222	1	AIR	PER	TWA	40	DEG C

STRESSOR: DUST

LOC: SD,SS FARRAGUT,DECK 2A

OPER: TA008 THERMAL INSULATION,ASBESTOS,CORE SAMPLING

APR 21,1986	92227	5	AIR	PER	TWA	400	PPM

STRESSOR: FLUORIDES

LOC: SD,SS FARRAGUT,DECK 2A

OPER: TF001 THERMAL INSULATION,FIBERGLASS,SHIPBOARD

APR 22,1986	33333	1	AIR	PER	PEAK	56	

STRESSOR: FLUOROCARBON POLYMERS (DECO

LOC: MARE,SSN 696,ULER,TURBINE 2

OPER: TF011 THERMAL INSULATION,FIBERGLASS,INSTALLING PADS

MAR 20,1986	92223	1	AIR	PER	TWA	56	PPM

LOC: SD,SS FARRAGUT,DECK 2A

OPER: TA008 THERMAL INSULATION,ASBESTOS,CORE SAMPLING

APR 21,1986	[illegible]	5	AIR	PER	TWA	700	PPM

SURVEY/BOUNDARY NUMBER: RHF1 ACTIVITY: LRNSY

DOCUMENT NUMBER: 00002 TYPE: ROUTINE
DATE: 27 MAY 84 INVESTIGATOR: HEALY,MARIEEE UIC:
ASSISTANT: UIC:

LOCATION: MARE
OPERATION: SHP001 SHAPING OPS,DRILLING,DRILLING
SHOP: 130 IN AGENCY: LRNSY
TEL: 3421 SUPERVISOR: JAMES,BARBARA J
OP FREQ: DAILY DURATION: LESS THAN 1 HOUR

COMMENT:

ENGINEERING CONTROL ADEQUATE?

PAGE: 001 SAMPLE CLASS:
SAMPLE SOURCE: TEST 2
CONTAINER LABEL:
COLLECTION MEDIA:

SAMPLE NUMBER: 222 BOUNDARY: IN

STRESSOR	AMOUNT AND UNITS
DUST	?

OVEREXPOSURE/OVER MSAL MANAGEMENT SUMMARY REPORT PAGE 1
BY STRESSOR/OPERATION FROM: APR 1,1986
SITE: MARE TO: AUG 11,1986

		TOTAL TAKEN	MSAL #	MSAL %	NAVY #	NAVY %	PEL #	PEL %	TLV #	TLV %	OTHER #	OTHER %
BENZENE												
ZH002		MISCELLANEOUS,CLEAN-UP,CLEANUP										
	TWA	1	1	100	1	100	1	100	1	100		
TOTALS												
	TWA	1	1	100	1	100	1	100	1	100		

MONTHLY SAMPLE SUMMARY MANAGEMENT REPORT
BY MONITOR
NUMBER OF SAMPLES

AUG 15,1986

SAMPLE DATE	PERSONAL TWA	PERSONAL STEL	PERSONAL CEIL	PERSONAL OTHER	GENERAL TWA	GENERAL STEL	GENERAL CEIL	GENERAL OTHER
INVESTIGATOR: GOOFY,HYGIENIST								
MAY 27,1986	0	0	0	0	0	0	0	0
MAY 29,1986	1	0	0	0	0	0	0	0
SUBTOTAL	1	0	0	0	0	0	0	0
INVESTIGATOR: HEALY,MARTEEE								
APR 21,1986	4	0	7	1	0	0	0	0
APR 22,1986	2	0	2	0	0	0	0	0
MAY 23,1986	1	0	0	0	0	0	0	0
MAY 27,1986	2	0	0	0	0	0	0	0
MAY 27,1986	5	0	0	0	0	0	0	0
MAY 27,1986	1	0	0	0	0	0	0	0
MAY 27,1986	2	0	0	0	0	0	0	0
MAY 27,1986	1	0	0	0	0	0	0	0
JUN 22,1986	2	0	0	0	0	0	0	0
SUBTOTAL	20	0	9	1	0	0	0	0
INVESTIGATOR: JACOBS,BABS								
MAR 20,1985	2	0	0	0	0	0	0	0
MAR 15,1986	4	0	3	3	0	0	0	0
MAR 20,1986	2	0	0	0	0	0	0	0
MAR 31,1986	1	0	0	0	0	0	0	0
JUL 23,1986	2	0	0	0	0	0	0	0
SUBTOTAL	11	0	3	3	0	0	0	0
INVESTIGATOR: MILLER,KATHY								
JUL 31,1985	1	0	0	0	0	0	0	0
SUBTOTAL	1	0	0	0	0	0	0	0
TOTAL	33	0	12	4	0	0	0	0

1 Summary Report of Samples
2 Sample Summary Report by Monitor
3 Sample Summary Report by Stressor
4 Detailed Samples Reports
5 Inquiry on Samples
6 Detailed Bulk Wipe Samples Reports
7 Overexposure/Over MSAL Report by Operation
8 Overexposure/Over MSAL Report by Location

Select Samples Reports Option:

***** NOTICE ***** This information is subject to the provisions of the Privacy Act of 1974 **********

SEP 10,1986

AGENCY:MINS SHOP:TERM

OVEREXPOSURE NOTICE

The following employee was IN AREA on JUL 5,1986 when the following overexposure reading was taken by Industrial Hygienist.

AARDVARK,JOE SSN:
BADGE:609100

STRESSOR	RESULT	UNITS	TYPE
BUTADIENE	120	PPM	TWA

The employee was using the following respiratory protection at the time: FULL FACE, ORGANIC VAPOR, and was engaged in a(n) SHAPING OPS,FORGING,FORGING operation.

This employee is advised to contact his/her supervisor or Code 106 of this facility if he has questions concerning exposure to this substance. The appropriate medical intervention is being arranged.

The protection factor for the respirator in use is therefore the actual Exposure was 120.0000 PPM.

APPENDIX E

EXAMPLE FROM REPORT VENTILATION SURVEY DATA OUTPUT PROCESS

SURVEY/BOUNDARY NUMBER: 586-0001-MN ACTIVITY: MINS DOCUMENT NUMBER: 12345

SURVEY TYPE: INITIAL
DATE: 5 JUL 86 INVESTIGATOR: NOEL,MICHAEL UIC: 34555
ASSISTANT: UIC:

LOCATION: MI,BLDG405,RM100,VENTILATION BOOTH
OPERATION: TF003 THERMAL INSULATION,FIBERGLASS,CUTTING CLOTH
SHOP: 944.3 IN AGENCY: MINS
TEL: SUPERVISOR: MCKINLEY,WM

COLLECTION INSTRUMENT(S):
HOT WIRE V-1
KURTZ 94034

SYSTEM ID: 001A SYSTEM TYPE: PERMANENT SYSTEM STATUS: SATISFACTORY
SYSTEM DESCRIPTION:

COMMENTS:

SOURCE ID: 1A-1 BLAST GATE/DAMPER POSITION: 3/4 OPEN
SOURCE TYPE: PERMANENT DUCT DIAMETER: 6 SQ IN
SOURCE STATUS: SATISFACTORY FACE/SLOT AREA: 6 SQ FT
HOOD DESCRIPTION: SLOTTED HOOD

MEASUREMENTS:

TYPE	DUCT AVG VEL (FPM)	FACE AVG VEL (FPM)	SLOT AVG VEL (FPM)	CAPTURE AVG VEL (FPM) @ X DISTANCE	STATIC PRESSURE AVG VEL (IN OF H20)
FIRST	350 FPM				
VEL STD	200 FPM				
AVE FLOW	250 CFM				
FLOW STD	250 CFM				
FIRST		100 FPM			
VEL STD		100 FPM			
AVE FLOW					
FLOW STD		150 CFM			

APPENDIX F

EXAMPLES FROM REPORT WALKTHROUGH SURVEY DATA OUTPUT PROCESS

SURVEY/BOUNDARY NUMBER: 85-0001-BJJ WALKTHROUGH
FROM: DEC 31,1905 SPECIAL
TO:

SPECIAL WALKTHRU REASON: JUST TESTING
INVESTIGATOR: GOOFY,HYGIENIST UIC: 00987
ASSISTANT: OTHER,HYGIENIST UIC: 00987

SURVEY COMMENT:
THIS SURVEY WAS DONE UDER THE MOST DEMANDING OF CONDITIONS, IN THAT THE HYGIENISTS COULD NOT EVEN GO OUT TO THE SITE TO SEE WHAT WAS HAPPENING, BUT INSTEAD HAD TO MAKE IT UP FORM INSIDE THEIR OWN LITTLE PEA-HEADS. TEST DATA IS LIKE THAT I GUESS.

LOCATION: MARE,B100,SPRAYING TANK
OPERATION: ZB001 MISCELLANEOUS,BAGGING,BAGGING
SHOP: 011 IN AGENCY: PTSMH
FREQ: DAILY DURATION: LESS THAN 1 HOUR
NEED TO SAMPLE? YES
EXPOSURE RISK: IMMINENT
NEGLIGIBLE RISK REASON:

OPERATION COMMENT:

MACHINERY:

PHYSICAL HAZARD	SOURCE	SIGHT?
ENGINEERING CONTROL IN USE		ADEQUATE?
OTHER CONTROLS IN USE		ADEQUATE?
RESPIRATORY PROTECTION IN USE		ADEQUATE?
PPE IN USE		ADEQUATE?
GC004	GLOVES, COTTON	YES

MATERIAL	QTY	UNITS
ABC CLEANER	3.00	BARRELS

CONTAINS STRESSORS: BENZENE
CHROMIC ACID
DICHLOROETHYLENE

OTHER STRESSORS

NOISE
HEAT [illegible]

SURVEY/BOUNDARY NUMBER: 86-0002-RJJ WALKTHROUGH
FROM: 26 JAN 86 ROUTINE
TO:

SPECIAL WALKTHRU REASON:
INVESTIGATOR: JACOBS,BARS UIC:
ASSISTANT: HEALY,MARIEEE UIC:

SURVEY COMMENT:
NO COMMENT

LOCATIONS/OPERATIONS

MAKE,SSN 696,LLER,TURBINE AREA
SHM004 SHAPING OPS,MACHINING,PLANAR

MAKE,SSN 696,ULER
IF020 THERMAL INSULATION,FIBERGLASS,SHIPBOARD RIPOUT

MAKE,SSN 696,ULER,CONDENSER
IF007 THERMAL INSULATION,FIBERGLASS,FILING

MAKE,SSN 696,ULER,TURBINE 1
IF013 THERMAL INSULATION,FIBERGLASS,MAKING PADS

MAKE,SSN 696,ULER,TURBINE 2
IF011 THERMAL INSULATION,FIBERGLASS,INSTALLING PADS

SURVEY/BOUNDARY NUMBER: 85-0001-BJJ WALKTHROUGH
FROM: 31 DEC 85 SPECIAL
TO:

SPECIAL WALKTHRU REASON: JUST TESTING
INVESTIGATOR: GOOFY,HYGIENIST UIC: 00987
ASSISTANT: OTHER,HYGIENIST UIC: 00987

SURVEY COMMENT:
THIS SURVEY WAS DONE UDER THE MOST DEMANDING OF CONDITIONS, IN THAT THE HYGIENISTS COULD NOT EVEN GO OUT TO THE SITE TO SEE WHAT WAS HAPPENING, BUT INSTEAD HAD TO MAKE IT UP FORM INSIDE THEIR OWN LITTLE PEA-HEADS. TEST DATA IS LIKE THAT I GUESS.

LOCATIONS/OPERATIONS

MARE,B906,RELAY ROOM
TF005 THERMAL INSULATION,FIBERGLASS,DRILLING
SOLB001 SOLID OPS,BALLAST,CANNING

MARE,B100,SPRAYING TANK
?B001 MISCELLANEOUS,BAGGING,BAGGING

OPERATION: SHROOI SHAPING OPS,BENDING,BENDING

LOCATION: MARE,B100,PAINT SHED

DATE SURVEYED: 22 MAY 86
EXPOSURE RISK: NEGLIGIBLE
NEED TO SAMPLE:
OP FREQ: DAILY DURATION: LESS THAN 1 HOUR
NUMBER OF PERSONS: 10
STRESSORS: BENZENE
CHROMIC ACID
ACETONE
CUTTING OILS

LOCATIONS BY STRESSOR JAN 17,1987 09:21 PAGE 1

STRESSORS

LOCATION	SURVEY NUMBER	TYPE	FROM DATE	TO DATE
STRESSOR: BENZENE				
BENZENE				
MI,MLDG200,RM100	W86-0001-MN	WALKTHROUGH	26 JUL 86	31 JUL 86
BENZENE				
MI,MLDG200,RM150	W86-0001-MN	WALKTHROUGH	26 JUL 86	31 JUL 86
BENZENE				
MI,MLDG 401,RM 105	W86-0002-MN	WALKTHROUGH	26 JUL 86	26 JUL 86

APPENDIX G

EXAMPLES FROM REPORT MATERIAL INVENTORY DATA OUTPUT PROCESS

MATERIAL INVENTORY REPORT AUG 22,1986 10:48 PAGE 1

SURVEY/BOUNDARY NUMBER: 85-0001-KDM MATERIAL INVENTORY
FROM: 10 MAY 86
TO:
INVESTIGATOR: HEALY,MARTEEE UIC:
ASSISTANT: UIC:

SURVEY COMMENT:

LOCATION:
MARE
SHOP: 011 IN AGENCY: PTSMH

MATERIAL	QTY	UNITS
OILY JUNK		

LOCATION	SURVEY NUMBER	TYPE	FROM DATE	TO DATE
MATERIAL: ACRYLIC PAINT				
MARE,B100,SPRAYING TANK	86-0071-RHF	MATERIAL INVENTORY	31 DEC 85	
MARE,B100,SPRAYING TANK	86-0001-RHF	WALKTHROUGH	31 DEC 85	
MARE,B100,SPRAYING TANK	86-0002-RHF	WALKTHROUGH	31 DEC 85	
MARE,B100,SPRAYING TANK	86-0003-RHF	WALKTHROUGH	31 DEC 85	
MARE,B100,SPRAYING TANK	86-0004-RHF	WALKTHROUGH	31 DEC 85	
MARE,B100,SPRAYING TANK	86-0031ORHF	WALKTHROUGH	1 MAY 86	
MARE,B100,PAINT SHED	85-0001-RDM	WALKTHROUGH	22 MAY 86	23 MAY 86
MARE,B100,SPRAYING TANK	86-0072-RHF	MATERIAL INVENTORY	27 MAY 86	29 MAY 86
MARE,B100,SPRAYING TANK	86-0073-RHF	MATERIAL INVENTORY	29 MAY 86	29 MAY 86
MARE,B100,SPRAYING TANK	86-0101-RJJ	WALKTHROUGH	4 JUN 86	

APPENDIX H

EXAMPLE FROM REPORT MATERIAL COMPOSITION OUTPUT PROCESS

SUKVEY MATERIALS LIST

HMIS ALIAS

AUG 22,1986 10:34 PAGE 1

TRADE NAME: UNCLE BILL'S PIZZA SAUCE

SYNONYMS:

UBPS

STRESSORS:

BENZENE
CHLORINE

HMIS INFO.

NSN: M/06835-20 FSCM: PNI:
PART NUMBER TRADE NAME(S):
MORPHOLINE
LOCAL STOCK NO:
MANUFACTURER: GENIUM PUBLISHING CORPORATION
DISTRIBUTOR:
SPECIFICATION:
DATE OF ENTRY: M/06835-20

NSN: M/06835-30 FSCM: PNI:
PART NUMBER TRADE NAME(S):
CARBOSTRIP
LOCAL STOCK NO:
MANUFACTURER: TURCO PRODUCTS, INC
DISTRIBUTOR:
SPECIFICATION:
*** DATA IS PROPRIETARY ***
DATE OF ENTRY: M/06835-30

1 Setup Exposure Materials File
2 List Exposure Materials File

Select Material Composition Option:

1 Boundary Management
2 Survey Entry
3 Monitoring Planning
4 Material Composition
5 Equipment Calibration
6 Sample Tracking
7 Employee Reports
8 Samples Reports
9 Setup Tables
10 Survey Reports
11 Print File Entries

Select Environmental and Personal Exposure Option: 10 Survey Reports

1 Survey Description List (By Survey Number)
2 Walkthrough Summary (By Date)
4 Inquire for Survey
5 Walkthrough Detail Reports
6 Survey Action Report

APPENDIX I

EXAMPLES FROM REPORT MONITORING PLANNING DATA OUTPUT PROCESS

WALKTHROUGHS DUE LIST

AUG 15,1986 11:18. PAGE 1

DATE LAST SURVEY	LAST INVESTIGATOR	UIC

DATE DUE: DEC 1986

LAST SURVEY NUMBER: 85-0001-BJJ

31 DEC 85 GOOFY,HYGIENIST 00987

LOCATION: MARE,B100,SPRAYING TANK

OPERATION: ZB001 MISCELLANEOUS,BAGGING,BAGGING

WALKTHROUGH FREQUENCY (IN MONTHS): 12

SHOP: 011 IN AGENCY: PTSMH

FREQUENCY OF OPERATION: DAILY

DURATION OF OPERATION: LESS THAN 1 HOUR

NUMBER OF PERSONS: 56

LAST SURVEY NUMBER: 86-0071-RHF

LOCATION: MARE,B906,RELAY ROOM

OPERATION: TF005 THERMAL INSULATION,FIBERGLASS,DRILLING

WALKTHROUGH FREQUENCY (IN MONTHS): 12

SHOP: 051 IN AGENCY: PTSMH

FREQUENCY OF OPERATION: 2-3 TIMES/MONTH

DURATION OF OPERATION: 1-4 HOURS

NUMBER OF PERSONS: .2

DATE DUE: JAN 1987

LAST SURVEY NUMBER: 86-0002-BJJ

26 JAN 86 JACOBS,BABS

LOCATION: MARE,SSN 696,ULER,TURBINE AREA

OPERATION: SHM004 SHAPING OPS,MACHINING,PLANAR

WALKTHROUGH FREQUENCY (IN MONTHS): 12

SHOP: 011 IN AGENCY: PTSMH

FREQUENCY OF OPERATION: WEEKLY

DURATION OF OPERATION: 1-4 HOURS

NUMBER OF PERSONS: 4

LOCATION: MARE,SSN 696,ULER

OPERATION: TF020 THERMAL INSULATION,FIBERGLASS,SHIPBOARD RIPOUT

WALKTHROUGH FREQUENCY (IN MONTHS): 12

SHOP: 056 IN AGENCY: PTSMH

FREQUENCY OF OPERATION: SPECIAL OPERATION

DURATION OF OPERATION: 5-8 HOURS

NUMBER OF PERSONS: 8

LOCATION: MARE,SSN 696,ULER,CONDENSER

OPERATION: TF007 THERMAL INSULATION,FIBERGLASS,FILING

WALKTHROUGH FREQUENCY (IN MONTHS): 12

SHOP: 056 IN AGENCY: PTSMH

FREQUENCY OF OPERATION: SPECIAL OPERATION

DURATION OF OPERATION: 1-4 HOURS

NUMBER OF PERSONS: 2

```
WALKTHROUGHS OVERDUE LIST                                                    AUG 15,1986  11:22    PAGE 1
    DATE LAST
    SURVEY                LAST INVESTIGATOR                UIC
-------------------------------------------------------------------------------------------------------------------


DATE DUE: MAR 1986
  LAST SURVEY NUMBER: 86-0071-RHF
    31 DEC 85             COOFY,HYGIENIST                  00987
    LOCATION: MARE,B906,RELAY ROOM
      OPERATION:   SOLB001         SOLID OPS,BALLAST,CANNING
         WALKTHROUGH FREQUENCY (IN MONTHS):   2
         SHOP:   011          IN AGENCY:   PTSMH
         FREQUENCY OF OPERATION:   6
          DURATION OF OPERATION:   LESS THAN 1 HOUR
              NUMBER OF PERSONS:   2


DATE DUE: JUN 1986
  LAST SURVEY NUMBER: 86-0071-RHF

    LOCATION: MARE,B100,SPRAYING TANK
      OPERATION:   TF001           THERMAL INSULATION,FIBERGLASS,SHIPBOARD
         WALKTHROUGH FREQUENCY (IN MONTHS):   6
         SHOP:   011          IN AGENCY:   PTSMH
         FREQUENCY OF OPERATION:   6
          DURATION OF OPERATION:   LESS THAN 1 HOUR
              NUMBER OF PERSONS:   4

    LOCATION: MARE,B100,SPRAYING TANK
      OPERATION:   ZB002           MISCELLANEOUS,CLEAN-UP,CLEANUP
         WALKTHROUGH FREQUENCY (IN MONTHS):   6
         SHOP:   051          IN AGENCY:   PTSMH
         FREQUENCY OF OPERATION:   DAILY
          DURATION OF OPERATION:   LESS THAN 1 HOUR
              NUMBER OF PERSONS:   2

DATE DUE: JUL 1986
  LAST SURVEY NUMBER: KDM1
    24 MAY 86             MILLER,KATHY                     100
    LOCATION: DC,D403,CLOSET
      OPERATION:   N/A             NONE,NONE,NO SPECIFIC OPERATION
         WALKTHROUGH FREQUENCY (IN MONTHS):   2
         SHOP:   051          IN AGENCY:   PTSMH
         FREQUENCY OF OPERATION:   2-3 TIMES/MONTH
          DURATION OF OPERATION:   5-8 HOURS
              NUMBER OF PERSONS:   3


     1   Walkthrough Frequency Entry
     2   Enter Sampling Goals
     3   Sampling Progress Report
     4   Walkthroughs Due Report
     5   Overdue Walkthroughs Report

Select Monitored Planned Option:
```

SAMPLING PROGRESS REPORT

AUG 15,1986 11:12. PAGE 1

STRESSOR	ANNUAL GOAL	OVERALL GOAL	SAMPLE EVERY n DAYS	MAN HOURS	DATE OF GOALS
LOC: BOS,R100,TEST ROOM					
OPER: TA002 THERMAL INSULATION,ASBESTOS,BRAKE SHOE					
BENZENE	6	12	90	30	06/26/86
ACTUAL COLLECTED:	0	0			
PERCENT COMPLETED:	0.0	0.0			
DATE LAST SAMPLED: 0					
LOC: DC,D403,CLOSET					
OPER: N/A NONE,NONE,NO SPECIFIC OPERATION					
CHROMIUM	20	100	30	33	05/27/86
ACTUAL COLLECTED:	0	0			
PERCENT COMPLETED:	0.0	0.0			
DATE LAST SAMPLED: 0					
LOC: DC,D403,UNDER RUG					
OPER: ZR001 MISCELLANEOUS,BAGGING,BAGGING					
DUST	1	10	300	2	05/27/86
ACTUAL COLLECTED:	0	0			
PERCENT COMPLETED:	0.0	0.0			
DATE LAST SAMPLED: 0					
LOC: MARE					
OPER: N/A NONE,NONE,NO SPECIFIC OPERATION					
DUST	50	300	15	300	03/06/86
ACTUAL COLLECTED:	5	5			
PERCENT COMPLETED:	10.0	1.7			
DATE LAST SAMPLED: MAR 5,1986					
NONE,NONE,NO SPECIFIC OPERATION					
MERCURY (INORGANIC)	15	60	30	150	03/05/86
ACTUAL COLLECTED:	4	4			
PERCENT COMPLETED:	26.7	6.7			
DATE LAST SAMPLED: MAR 5,1986					
OPER: TA007 THERMAL INSULATION,ASBESTOS,CLOTH REMOVAL					
MERCURY (INORGANIC)	24	200	15	500	03/03/86
ACTUAL COLLECTED:	0	0			
PERCENT COMPLETED:	0.0	0.0			
DATE LAST SAMPLED: 0					
OPER: TF001 THERMAL INSULATION,FIBERGLASS,SHIPBOARD					
BENZOYL PEROXIDE	8	30	90	4	03/03/86
ACTUAL COLLECTED:	0	0			
PERCENT COMPLETED:	0.0	0.0			
DATE LAST SAMPLED: 0					
THERMAL INSULATION,FIBERGLASS,SHIPBOARD					
COPPER DUST	35	78	15	150	03/03/86
ACTUAL COLLECTED:	0	0			

APPENDIX J

EXAMPLES FROM REPORT LABORATORY TRACKING DATA OUTPUT PROCESS

```
OUTSTANDING SAMPLES BY LABORATORY WITHIN DATE                                   AUG 22,1986  10:47    PAGE 1
SAMPLE #    SURVEY #    DATE SENT  DATE DUE  LABORATORY      SAMPLE REPORT DEST.
-------------------------------------------------------------------------------------------------------------

444444      4444        01/14/86   02/14/86  ABBOTT
345678      34567       02/01/86   02/25/86  WYATT
222222      2222        02/22/86   03/22/86  WYATT
45678       234         03/11/86   04/10/86  WYATT
345         34545       03/19/86   03/24/86  WYATT          MIKE NOEL
786         232         03/20/86             WYATT
342345      4545        03/20/86   03/30/86  WYATT


     1   Send Out Samples
     2   Receive Sample
     3   Overdue Samples Report
     4   Outstanding Samples Report

Select Sample Tracking Option: 

     1   Boundary Management
     2   Survey Entry
     3   Monitoring Planning
     4   Material Composition
     5   Equipment Calibration
     6   Sample Tracking
     7   Employee Reports
     8   Samples Reports
     9   Setup Tables
     10  Survey Reports
     11  Print File Entries

Select Environmental and Personal Exposure Option: 10  Survey Reports

     1   Survey Description List (By Survey Number)
     2   Walkthrough Summary (By Date)
     4   Inquire for Survey
     5   Walkthrough Detail Reports
     6   Survey Action Report
     7   Overdue Survey Actions Report
     8   Material Inventory Report (By Survey Number)
     9   Exposure Risk Report
     10  Ventilation Survey Reports
     11  Material Inventory Report (By Location)
     12  Material Location List

Select Survey Reports Option: 8  Material Inventory Report (By Survey Number)
  START WITH SURVEY NUMBER: FIRST//
    START WITH FROM DATE: FIRST//
DEVICE: A    RIGHT MARGIN: 132//
```

OVERDUE SAMPLES REPORT AUG 22,1986 10:47 PAGE 1

SAMPLE #	SURVEY #	DATE SENT	DATE DUE	LABORATORY	SAMPLE REPORT DEST.
345	34545	03/19/86	03/24/86	WYATT	MIKE NOEL
45678	234	03/11/86	04/10/86	WYATT	
222222	2222	02/22/86	03/22/86	WYATT	
342345	4545	03/20/86	03/30/86	WYATT	
345678	34567	02/01/86	02/25/86	WYATT	
444444	4444	01/14/86	02/14/86	ABBOTT	

```
     1   Send Out Samples
     2   Receive Sample
     3   Overdue Samples Report
     4   Outstanding Samples Report

Select Sample Tracking Option: 4  Outstanding Samples Report
  START WITH LABORATORY: FIRST//
DEVICE:     RIGHT MARGIN: 132//
```

APPENDIX K

EXAMPLES FROM REPORT SURVEY ACTIONS OUTPUT PROCESS

SURVEY ACTION NUMBER: 5-86 STATUS: COMPLETED
FOLLOWUP: 28 MAY 86 COMPLETED: 27 MAY 86
CREATED: 27 MAY 86 INVESTIGATOR: GOOFY,HYGIENIST
SURVEY/BOUNDARY NUMBER: 86-0001-RHF
LOC: MARE,B906,RELAY ROOM
OPER: SOLB001 SOLID OPS,BALLAST,CANNING
SHOP: 011 IN AGENCY: PTSMH
DESC: THE DESCRIPTION IS LENGTHY BUT DOESN'T MEAN ANYTHING.

SURVEY ACTION NUMBER: 9-86 STATUS: PENDING
FOLLOWUP: 5 JUN 86 COMPLETED:
CREATED: 29 MAY 86 INVESTIGATOR: JACOBS,BARB
SURVEY/BOUNDARY NUMBER:
LOC: SB,SS FARRAGUT,DECK 2A
OPER: TF020 THERMAL INSULATION,FIBERGLASS,SHIPBOARD RIPOUT
SHOP: 011 IN AGENCY: PTSMH
DESC: THE PROBLEM IS .....

SURVEY ACTION NUMBER: 3-86 STATUS: COMPLETED
FOLLOWUP: 9 FEB 86 COMPLETED: 10 AUG 86
CREATED: 27 MAY 86 INVESTIGATOR: MILLER,KATHY
SURVEY/BOUNDARY NUMBER: KDM
LOC: DC,B403,CLOSET
OPER: N/A NONE,NONE,NO SPECIFIC OPERATION
SHOP: 051 IN AGENCY: PTSMH
DESC: This area needs followup for testing of the survey action capability.

SURVEY ACTION NUMBER: 8-86 STATUS: COMPLETED
FOLLOWUP: 5 JUN 86 COMPLETED: 1 SEP 86
CREATED: 29 MAY 86 INVESTIGATOR: MILLER,KATHY
SURVEY/BOUNDARY NUMBER: KDM
LOC: DC,B403,CLOSET
OPER: N/A NONE,NONE,NO SPECIFIC OPERATION
SHOP: 051 IN AGENCY: PTSMH
DESC: There is a problem with how the material is stored, but they promise to fi it.

SURVEY ACTION NUMBER: 4-86 STATUS: COMPLETED
FOLLOWUP: 10 FEB 86 COMPLETED: 7 MAY 86
CREATED: 12 MAY 86 INVESTIGATOR: GOOFY,HYGIENIST
SURVEY/BOUNDARY NUMBER: 86-0005-BJJ
LOC: MARE,SSN 696,LLER,TURBINE AREA
OPER: SOLB005 SOLID OPS,BALLAST,REMOVAL
SHOP: 051 IN AGENCY: PTSMH
DESC: The people in this area are working themselves to death in the heat.

SURVEY ACTION NUMBER: 4-86 STATUS: PENDING
FOLLOWUP: 15 JUL 86 COMPLETED:
CREATED: 19 JUL 86 INVESTIGATOR: WELLS ,BILL
SURVEY/BOUNDARY NUMBER: S86-0003-MN
LOC: MI,BLDG300,RM100
OPER: TA006 THERMAL INSULATION,ASBESTOS,CLUTCH
SHOP: 972.1 IN AGENCY: MINS
DESC: INADEQUATE LIGHTING NEEDS TO BE CORRECTED

SURVEY ACTION NUMBER: 3-86 STATUS: PENDING
FOLLOWUP: 21 JUL 86 COMPLETED:
CREATED: 19 JUL 86 INVESTIGATOR: WELLS ,BILL
SURVEY/BOUNDARY NUMBER: S86-0003-MN
LOC: MI,BLDG300,RM100
OPER: TA006 THERMAL INSULATION,ASBESTOS,CLUTCH
SHOP: 972.1 IN AGENCY: MINS
DESC: MACHINE GUARDING NEEDS TO BE INSTALLED

SURVEY ACTION NUMBER: 1-86 STATUS: PENDING
FOLLOWUP: 23 JUL 86 COMPLETED:
CREATED: 19 JUL 86 INVESTIGATOR: WELLS ,BILL
SURVEY/BOUNDARY NUMBER: S86-0003-MN
LOC: MI,BLDG300,RM100
OPER: TA006 THERMAL INSULATION,ASBESTOS,CLUTCH
SHOP: 972.1 IN AGENCY: MINS
DESC: CHECK HOUSEKEEPING

SURVEY ACTION NUMBER: 2-86 STATUS: PENDING
FOLLOWUP: 25 JUL 86 COMPLETED:
CREATED: 19 JUL 86 INVESTIGATOR: WELLS ,BILL
SURVEY/BOUNDARY NUMBER: S86-0003-MN
LOC: MI,BLDG300,RM100
OPER: TA006 THERMAL INSULATION,ASBESTOS,CLUTCH
SHOP: 972.1 IN AGENCY: MINS
DESC: CLEAN OUT LEAD BIN

SURVEY ACTION NUMBER: 7-86 STATUS: PENDING
FOLLOWUP: 29 JUL 86 COMPLETED:
CREATED: 26 JUL 86 INVESTIGATOR: NOEL,MICHAEL
SURVEY/BOUNDARY NUMBER: W86-0002-MN
LOC: MI,BLDG 401,RM 105
OPER: SHM003 SHAPING OPS,MACHINING,MILLING
SHOP: 911 IN AGENCY: MINS
DESC: REPLACE FILTER ELEMENTS OVER DRILL PRESS BEFORE NEXT OPERATION

ID NUMBER	1071,.01	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
LOCATION	1071,2	POINTER TO LOCATION FILE (#1073)
LEAD SHOP	1071,3	POINTER TO AGENCY UNIT FILE (#1074) Enter the CODE/ABBREVIATION for the shop in charge of the BOUNDARY
SUPERVISOR	1071,4	POINTER TO EMPLOYEE FILE (#1004)
STRESSOR	1071,5	POINTER TO STRESSOR FILE (#1083)
TYPE	1071,6	SET : 'G' FOR GLOVE BAG ; 'I' FOR ISOLATED ; 'C' FOR CONTROLLED
STATUS	1071,7	SET : 'O' FOR OPEN ; 'C' FOR CLOSED
DATE/TIME ESTABLISHED	1071,8	DATE
SHIFT ESTABLISHED	1071,9	SET : '1' FOR DAY SHIFT ; '2' FOR EVENING ; '3' FOR NIGHT
DATE/TIME BOUNDARY # ASSIGNED	1071,10	DATE
DATE/TIME DISESTABLISHED	1071,11	DATE
SHIFT DISESTABLISHED	1071,12	SET : '1' FOR DAY ; '2' FOR EVENING ; '3' FOR NIGHT
WORK PROCEDURE NUMBER	1071,13	FREE TEXT ANSWER MUST BE 3-16 CHARACTERS IN LENGTH
TOTAL HOURS	1071,20	COMPUTED -- TOTAL(EMPLOYEE:EMPLOYEE MINUTES:)/60
SHIFT RECORD DATE	1071,50	1071.01 DATE Multiple
SHIFT RECORD DATE	1071.01,.01	DATE
SHIFT	1071.01,1	1071.02 SET Multiple
SHIFT	1071.02,.01	SET : '1' FOR DAY ; '2' FOR EVENING ; '3' FOR NIGHT ; '0' FOR CALENDAR DAY
SUPERVISOR	1071.02,1	POINTER TO EMPLOYEE FILE (#1004)
SUPERVISOR CHECKLIST RECEIVED	1071.02,2	SET : 'Y' FOR YES ; 'N' FOR NO
ACCESS LOG NUMBER	1071.02,3	FREE TEXT ANSWER MUST BE 3-10 CHARACTERS IN LENGTH
EMPLOYEE	1071,100	1071.04 POINTER Multiple
EMPLOYEE	1071.04,.01	POINTER TO EMPLOYEE FILE (#1004)
ACCESS LOG #	1071.04,1	1071.05 Multiple
ACCESS LOG #	1071.05,.01	NUMBER
RESPIRATOR TYPE	1071.05,.03	POINTER TO RESPIRATORS FILE (#1105)

BOUNDARY OPERATION	1071.05,.07	POINTER TO OPERATION FILE (#1087)
TIME IN	1071.05,1	1071.06 Multiple
TIME IN	1071.06,.01	FREE TEXT Enter at TIME in Military time form (0 - 24:00)
TIME OUT	1071.06,1	FREE TEXT Enter the TIME OUT in Military time form (:01 - 24:00)
DATE/TIME IN	1071.06,2	DATE
DATE/TIME OUT	1071.06,3	DATE
MINUTES IN BOUNDARY	1071.06,4	COMPUTED -- MINUTES(DATE/TIME OUT,DATE/TIME IN)
TOTAL MINUTES	1071.05,2	COMPUTED -- TOTAL(TIME IN:MINUTES IN BOUNDARY)
EMPLOYEE MINUTES	1071.04,2	COMPUTED -- TOTAL(ACCESS LOG #:TOTAL MINUTES)
EMPLOYEE HOURS	1071.04,3	COMPUTED -- TOTAL(ACCESS LOG #:TOTAL MINUTES)/60
EMPLOYEE DAYS	1071.04,4	COMPUTED -- COUNT(ACCESS LOG #)

SERIAL NUMBER	1086,.01	FREE TEXT Enter the SERIAL NUMBER in 3-30 characters
MODEL NUMBER	1086,1	FREE TEXT Enter a 1-8 character MODEL NUMBER
INSTRUMENT CODE	1086,2	FREE TEXT Enter a CODE or abbreviation to uniquely identify this instrument 1-10 characters
TYPE	1086,3	POINTER TO COLLECTION INST TYPE FILE (#1094) Enter the COLLECTION INSTRUMENT TYPE which describes this instrument
MANUFACTURER	1086,4	FREE TEXT Enter the MANUFACTURER name in 3-30 characters
LOCAL STORAGE LOCATION	1086,7	POINTER TO EQUIPMENT STORAGE LOCATION FILE (#1096) Enter the name of the EQUIPMENT STORAGE LOCATION where this instrument is kept
METHOD OF CALIBRATION	1086,8	FREE TEXT Enter the METHOD OF CALIBRATION in 3-30 characters
USUAL CALIBRATION AGENCY	1086,10	POINTER TO CALIBRATION AGENCY FILE (#1095) Enter the name of the AGENCY which usually performs the calibration
USUAL COST	1086,11	NUMBER
TURNAROUND TIME IN DAYS	1086,12	NUMBER BETWEEN 1 AND 200
USUAL POINT OF CONTACT	1086,13	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
USUAL CONTACT PHONE 1	1086,14	FREE TEXT ANSWER MUST BE 4-20 CHARACTERS IN LENGTH
USUAL CONTACT PHONE 2	1086,14.5	FREE TEXT ANSWER MUST BE 4-20 CHARACTERS IN LENGTH
LAST CALIBRATION DATE	1086,15	COMPUTED DATE -- 1ST(CALIBRATION DATE)
NEXT CALIBRATION DATE	1086,16	DATE
CALIBRATION DATE	1086,20	1086.01 DATE Multiple
CALIBRATION DATE	1086.01,.01	DATE
CALIBRATION AGENCY	1086.01,1	POINTER TO CALIBRATION AGENCY FILE (#1095)
CALIBRATOR NAME	1086.01,2	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
ACTUAL COST	1086.01,3	NUMBER BETWEEN 0 AND 600
DATE SENT	1086.01,4	DATE
DATE RECEIVED	1086.01,5	DATE
TURNAROUND DAYS	1086.01,6	COMPUTED -- DATE RECEIVED-DATE SENT
DATE SENT	1086,30	DATE
DATE EXPECTED	1086,31	DATE
AGENCY SENT TO	1086,32	POINTER TO CALIBRATION AGENCY FILE (#1095) Enter the name of the AGENCY which to which the instrument ins being sent

CONTACT PERSON	1086,33	FREE TEXT	ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
TELEPHONE NUMBER	1086,34	FREE TEXT	ANSWER MUST BE 4-20 CHARACTERS IN LENGTH
RETURN AUTHORIZATION NUMBER	1086,35	FREE TEXT	ANSWER MUST BE 3-15 CHARACTERS IN LENGTH
DATE INACTIVATED	1086,99	DATE	

SAMPLE NUMBER	1130,.01	FREE TEXT ANSWER MUST BE 3-10 CHARACTERS IN LENGTH
SURVEY NUMBER	1130,1	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
LABORATORY	1130,2	POINTER TO LABORATORIES(OUTSIDE) FILE (#1131)
SAMPLE PRIORITY	1130,3	SET ; '1' FOR 24 HOUR TURNAROUND ; '2' FOR 48 HOUR TURNAROUND ; '3' FOR ROUTINE ; '4' FOR 7 DAYS ; '5' FOR OTHER
SAMPLE PRIORITY DESCRIPTION	1130,4	FREE TEXT ANSWER MUST BE 2-50 CHARACTERS IN LENGTH
ANALYSIS REQUESTED	1130,5	FREE TEXT ANSWER MUST BE 3-50 CHARACTERS IN LENGTH
DATE SAMPLE SENT OUT	1130,6	DATE
DATE SAMPLE RESULTS EXPECTED	1130,7	DATE
SAMPLE REPORT DESTINATION	1130,8	FREE TEXT ANSWER MUST BE 2-50 CHARACTERS IN LENGTH
SAMPLE STATUS	1130,9	SET ; 'S' FOR SENT OUT ; 'R' FOR RECEIVED
SAMPLE ANALYSIS COST	1130,10	NUMBER BETWEEN 0 AND 10000
DATE SAMPLE RECEIVED	1130,11	DATE

TRADE NAME	1142,.01	FREE TEXT	ANSWER MUST BE 3-50 CHARACTERS IN LENGTH
SYNONYM	1142,1	1142.01 Multiple	
SYNONYM	1142.01,.01	FREE TEXT	ANSWER MUST BE 3-50 CHARACTERS IN LENGTH
HMIS ALIAS	1142,2	1142.02 POINTER	Multiple
HMIS ALIAS	1142.02,.01	POINTER TO MATERIALS FILE (#1080)	
STRESSOR	1142,3	1142.03 POINTER	Multiple
STRESSOR	1142.03,.01	POINTER TO STRESSOR FILE (#1083)	
FILLER	1142,5	FREE TEXT	ANSWER MUST BE 1 CHARACTER IN LENGTH

SURVEY/BOUNDARY NUMBER	1124,.01	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
ACTIVITY/COMMAND	1124,1	POINTER TO AGENCY UNIT FILE (#1074)
DOCUMENT NUMBER	1124,2	1124.01 Multiple
DOCUMENT NUMBER	1124.01,.01	FREE TEXT ANSWER MUST BE 5 CHARACTERS IN LENGTH
TYPE OF SURVEY	1124.01,1	SET ; '1' FOR INITIAL ; '2' FOR ROUTINE ; '3' FOR FOLLOW-UP ; '4' FOR INVESTIGATION ; '5' FOR OTHER
OTHER TYPE DESCRIPTION	1124.01,2	FREE TEXT ANSWER MUST BE 2-20 CHARACTERS IN LENGTH
DATE	1124.01,3	DATE
INVESTIGATOR	1124.01,4	POINTER TO SURVEY MONITOR FILE (#1104)
ASSISTANT	1124.01,5	POINTER TO SURVEY MONITOR FILE (#1104)
LOCATION	1124.01,6	POINTER TO LOCATION FILE (#1073)
SITE	1124.01,6.5	FREE TEXT ANSWER MUST BE 2-8 CHARACTERS IN LENGTH
OPERATION	1124.01,7	POINTER TO OPERATION FILE (#1087)
SHOP	1124.01,8	POINTER TO AGENCY UNIT FILE (#1074)
SHOP TELEPHONE	1124.01,9	FREE TEXT ANSWER MUST BE 4-20 CHARACTERS IN LENGTH
SUPERVISOR	1124.01,10	POINTER TO EMPLOYEE FILE (#1004)
FREQUENCY OF OPERATION	1124.01,11	POINTER TO FREQUENCY OF OPS FILE (#1106)
DURATION	1124.01,12	SET ; '1' FOR LESS THAN 1 HOUR ; '2' FOR 1-4 HOURS ; '3' FOR 5-8 HOURS ; '4' FOR GREATER THAN 4 HOURS
COMMENTS	1124.01,20	1124.03 WORD-PROCESSING
COMPUTE SUBTOTAL/PRINT PER-TWA	1124.01,21	COMPUTED
PER-STEL PRINT	1124.01,22	COMPUTED
PER-CEIL PRINT	1124.01,23	COMPUTED
PER-OTHER PRINT	1124.01,24	COMPUTED
GEN-TWA PRINT	1124.01,25	COMPUTED
GEN-STEL PRINT	1124.01,26	COMPUTED
GEN-CEIL PRINT	1124.01,27	COMPUTED
GEN-OTHER PRINT	1124.01,28	COMPUTED
COMPUTE STR TOT/PRINT PER-TWA	1124.01,29	COMPUTED
ENGINEERING CONTROLS	1124.01,30	1124.02 Multiple

ENGINEERING CONTROLS	1124.02,.01	FREE TEXT ANSWER MUST BE 3-80 CHARACTERS IN LENGTH
ADEQUATE	1124.02,1	SET: 'Y' FOR YES; 'N' FOR NO
COMMENT	1124.02,2	1124.1 WORD-PROCESSING
PERT TEST	1124.01,53	COMPUTED
PAGE NUMBER	1124.01,100	1124.04 Multiple
PAGE NUMBER	1124.04,.01	NUMBER OF THE FORM, PAGES MUST BE UNIQUE FOR EACH SAMPLE CLASS
SAMPLE CLASS	1124.04,1	SET: 'A' FOR AIR; 'D' FOR DIRECT READING; 'N' FOR NOISE; 'H' FOR HEAT
TYPE OF SAMPLE	1124.04,2	SET: 'GA' FOR GENERAL AREA; 'PER' FOR PERSONAL
COLLECTION INSTRUMENT 1	1124.04,3	POINTER TO COLLECTION INSTRUMENT FILE (#1086)
COLLECTION INSTRUMENT 2	1124.04,4	POINTER TO COLLECTION INSTRUMENT FILE (#1086)
INSTRUMENT2 CODE	1124.04,4.1	COMPUTED -- COLLECTION INSTRUMENT 2:INSTRUMENT CODE
INSTRUMENT2 MANUFACTURER	1124.04,4.2	COMPUTED -- COLLECTION INSTRUMENT 2:MANUFACTURER
INSTRUMENT2 TYPE	1124.04,4.3	COMPUTED -- COLLECTION INSTRUMENT 2:TYPE
INST2 FLAG	1124.04,4.4	NUMBER BETWEEN 0 AND 99999
SAMPLING STRATEGY	1124.04,5	POINTER TO SAMPLING STRATEGY FILE (#1112)
EQUIPMENT NOISE LABELLED	1124.04,9	SET: 'Y' FOR YES; 'N' FOR NO
AREA NOISE POSTED	1124.04,10	SET: 'Y' FOR YES; 'N' FOR NO
NOISE SOURCE	1124.04,11	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
NOISE RADIUS	1124.04,12	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
SELECT FOR MEDICAL PROTOCOL	1124.04,39	COMPUTED
EMPLOYEE SAMPLED	1124.04,39.9	POINTER TO EMPLOYEE FILE (#1004)
EMP-X	1124.04,40	1124.07 POINTER Multiple
EMPLOYEE	1124.07,.01	POINTER TO EMPLOYEE FILE (#1004)
RESPIRATOR	1124.07,1	POINTER TO RESPIRATORS FILE (#1105)
OPERATION	1124.07,2	POINTER TO OPERATION FILE (#1087)
PPE	1124.07,3	1124.09 POINTER Multiple
PPE	1124.09,.01	POINTER TO PERSONAL PROTECTIVE EQUIPMENT FILE (#1103)

ADEQUATE	1124.09,1	SET ; 'Y' FOR YES ; 'N' FOR NO
PPE COMMENT	1124.09,2	1124.12 WORD-PROCESSING
SAMPLED/IN AREA	1124.07,4	SET ; 'S' FOR SAMPLED ; 'I' FOR IN AREA
STRESSORS	1124.04,50	1124.08 POINTER Multiple
STRESSORS	1124.08,.01	POINTER TO STRESSOR FILE (#1083)
RESULT TYPE	1124.08,1	SET ; 'T' FOR TWA ; 'S' FOR STEL ; 'C' FOR CEILING ; 'O' FOR OTHER ; 'P' FOR PEAK ; 'W' FOR WBGT
RESULT	1124.08,2	NUMBER BETWEEN .001 AND 159999
UNITS	1124.08,3	POINTER TO SAMPLE UNITS FILE (#1101)
TIME OF DAY	1124.08,4	FREE TEXT Answer with a time in military time format
PERCENT HUMIDITY	1124.08,5	NUMBER BETWEEN 0 AND 100!4 DECIMAL PLACES MAX.
TEST	1124.08,6	COMPUTED
DATE ENTERED	1124.08,7	DATE
IN/OUTDOORS (I/O)	1124.08,8	SET ; 'I' FOR INDOORS ; 'O' FOR OUTDOORS
RADIANT LOAD (Y/N)	1124.08,9	SET ; 'Y' FOR YES ; 'N' FOR NO
NAVY LIMIT NOW	1124.08,10	COMPUTED
PEL LIMIT NOW	1124.08,11	COMPUTED
TLV LIMIT NOW	1124.08,12	COMPUTED
OTHER LIMIT NOW	1124.08,13	COMPUTED
MSAL NOW	1124.08,14	COMPUTED
OTHER LIMIT AUTH NOW	1124.08,15	COMPUTED
OVER MSAL NOW	1124.08,20	COMPUTED
OVER NAVY LIMIT NOW	1124.08,21	COMPUTED
OVER PEL NOW	1124.08,22	COMPUTED
OVER TLV NOW	1124.08,23	COMPUTED
OVER OTHER LIMIT NOW	1124.08,24	COMPUTED
OVEREXPOSURE NOW	1124.08,25	COMPUTED
CLASSIFICATION	1124.08,26	COMPUTED -- STRESSORS:CLASSIFICATION

NAVY LIMIT AT ENTRY	1124.08;30	NUMBER	BETWEEN .0001 AND 159999
PEL LIMIT AT ENTRY	1124.08;31	NUMBER	BETWEEN .0001 AND 159999
TLV LIMIT AT ENTRY	1124.08;32	NUMBER	BETWEEN .0001 AND 159999
OTHER LIMIT AT ENTRY	1124.08;33	NUMBER	BETWEEN .0001 AND 159999
MSAL AT ENTRY	1124.08;34	NUMBER	BETWEEN .0001 AND 159999
OTHER LIMIT AUTH AT ENTRY	1124.08;35	FREE TEXT	ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
OVER MSAL AT ENTRY	1124.08;40	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER NAVY AT ENTRY	1124.08;41	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER PEL AT ENTRY	1124.08;42	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER TLV AT ENTRY	1124.08;43	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER OTHER LIM AT ENTRY	1124.08;44	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER LIMIT AT ENTRY	1124.08;45	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER EXPOSURE AT ENTRY	1124.08;46	SET ; '0' FOR NOT OVER EXPOSED ; '1' FOR OVEREXPOSED	
TEST STRESSOR	1124.08;50	COMPUTED	
TWA COUNT	1124.08;60	SET ; '1' FOR TWA ; '0' FOR NOT TWA	
STEL COUNT	1124.08;61	SET ; '1' FOR STEL ; '0' FOR NOT STEL	
COMPUTE OVEREX/MSAL DATA	1124.08;70	COMPUTED	
SET TWA CALC	1124.08;71	COMPUTED	
LIMIT TYPE TAKEN	1124.08;72	COMPUTED	
COUNTER UPDATE	1124.08;73	COMPUTED	
LIMIT NUMBER PRINT	1124.08;74	COMPUTED	
PRINT LIMIT %	1124.08;75	COMPUTED	
STEL CALC	1124.08;76	COMPUTED	
CEILING CALC	1124.08;77	COMPUTED	
PEAK CALC	1124.08;78	COMPUTED	
OTHER CALC	1124.08;79	COMPUTED	
KILL OVEREX REPORT ARRAY	1124.08;80	COMPUTED	

BULK/WIPE PAGE NUMBER	1124.01;200	1124.05	Multiple

BULK/WIPE PAGE NUMBER	1124.05,.01	FREE TEXT ANSWER MUST BE 1-12 CHARACTERS IN LENGTH
SAMPLE CLASS	1124.05,.5	SET ; 'B' FOR BULK ; 'W' FOR WIPE
SOURCE OF SAMPLE	1124.05,1	1124.06 WORD-PROCESSING
CONTAINER LABEL	1124.05,2	1124.11 WORD-PROCESSING
COLLECTION MEDIA	1124.05,2.5	FREE TEXT ANSWER MUST BE 1-100 CHARACTERS IN LENGTH
SAMPLE NUMBER	1124.05,3	1124.13 Multiple
SAMPLE NUMBER	1124.13,.01	NUMBER BETWEEN 0 AND 99999
IN OR OUT OF BOUNDARY AREA	1124.13,1	SET ENTER A (I)N OR (O)UT ; 'I' FOR IN ; 'O' FOR OUT
WIPE AREA	1124.13,1.5	FREE TEXT ANSWER MUST BE 1-120 CHARACTERS IN LENGTH
STRESSOR	1124.13,2	1124.14 POINTER Multiple
STRESSOR	1124.14,.01	POINTER TO STRESSOR FILE (#1083)
AMOUNT AND UNITS	1124.14,2	FREE TEXT ANSWER MUST BE 1-20 CHARACTERS IN LENGTH
DATE CONVERSION	1124,3	COMPUTED
TEST	1124,4	COMPUTED

LOCATION	1117,.01	POINTER TO LOCATION FILE (#1073)
OPERATION	1117,1	1117.01 POINTER Multiple
OPERATION	1117.01,.01	POINTER TO OPERATION FILE (#1087) Use 'N/A' to indicate that the goals are for no specific operation
STRESSORS	1117.01,1	1117.02 POINTER Multiple
STRESSORS	1117.02,.01	POINTER TO STRESSOR FILE (#1083)
ANNUAL GOAL	1117.02,1	NUMBER BETWEEN 1 AND 1000
OVERALL GOAL	1117.02,2	NUMBER BETWEEN 1 AND 5000
SAMPLE EVERY n DAYS	1117.02,3	NUMBER BETWEEN 1 AND 600
MAN HOURS MONITORING	1117.02,4	NUMBER BETWEEN 0 AND 10000
DATE OF GOALS	1117.02,5	DATE
NUMBER OF SAMPLES - OVERALL	1117.02,6	COMPUTED
NUMBER OF SAMPLES - GIVEN YEAR	1117.02,7	COMPUTED
LAST DATE SAMPLED	1117.02,8	COMPUTED
PERCENT OVERALL	1117.02,9	COMPUTED -- NUMBER OF SAMPLES - OVERALL#100/OVERALL GOAL
PERCENT OF YEAR	1117.02,10	COMPUTED -- NUMBER OF SAMPLES - GIVEN YEAR#100/ANNUAL GOAL

DATA DICTIONARY #1137 -- OVER MSAL RESULTS FILE UCI: HSC000$DUA7:[DEVEL] MITRE 10/21/86 PAGE 1

NAME	1137,.01	FREE TEXT ANSWER MUST BE 3-10 CHARACTERS IN LENGTH
SURVEY/BOUNDARY NUMBER	1137,1	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
DOCUMENT NUMBER	1137,2	FREE TEXT ANSWER MUST BE 5 CHARACTERS IN LENGTH
PAGE	1137,3	NUMBER BETWEEN 1 AND 6000
DATE SAMPLED	1137,4	DATE
LOC	1137,5	POINTER TO LOCATION FILE (#1073)
SURVEYED OPERATION	1137,5.5	POINTER TO OPERATION FILE (#1087)
STRESSOR	1137,6	POINTER TO STRESSOR FILE (#1083)
RESULT TYPE	1137,7	SET : 'T' FOR TWA ; 'S' FOR STEL ; 'C' FOR CEILING ; 'O' FOR OTHER ; 'P' FOR PEAK
RESULT	1137,8	NUMBER BETWEEN .0001 AND 159999
ACTUAL EXPOSURE	1137,8.5	COMPUTED -- $S(+(RESPIRATOR:PROTECTION FACTOR):0:RESULT/(RESPIRATOR:PROTECTION FACTOR),1:RESULT)
UNITS	1137,9	POINTER TO SAMPLE UNITS FILE (#1101)
DATE ENTERED	1137,10	DATE
DATE COMPILED	1137,11	DATE
AGENCY	1137,12	POINTER TO AGENCY UNIT FILE (#1074)
FORM LETTER CODE	1137,13	FREE TEXT ANSWER MUST BE 3-10 CHARACTERS IN LENGTH
PRINT DATE	1137,14	DATE
ANNOTATION	1137,15	1137.01 WORD-PROCESSING
EMPLOYEE	1137,20	POINTER TO EMPLOYEE FILE (#1004)
RESPIRATOR	1137,21	POINTER TO RESPIRATORS FILE (#1105)
OPERATION	1137,22	POINTER TO OPERATION FILE (#1087)
SAMPLED/IN AREA	1137,24	SET : 'S' FOR SAMPLED ; 'I' FOR IN AREA
NAVY LIMIT	1137,30	NUMBER BETWEEN .0001 AND 159999
PEL LIMIT	1137,31	NUMBER BETWEEN .0001 AND 159999
TLV LIMIT	1137,32	NUMBER BETWEEN .0001 AND 159999
OTHER LIMIT	1137,33	NUMBER BETWEEN .0001 AND 159999
MSAL	1137,34	NUMBER BETWEEN .0001 AND 159999
OTHER LIMIT AUTH	1137,35	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH

OVER MSAL	1137,36	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER NAVY	1137,37	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER PEL	1137,38	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER TLV	1137,39	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER OTHER	1137,40	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVER LIMIT	1137,41	FREE TEXT	ANSWER MUST BE 1-3 CHARACTERS IN LENGTH
OVEREXPOSURE AT ENTRY	1137,42	SET ; '0' FOR NOT OVER EXPOSED ; '1' FOR OVEREXPOSED	

SURVEY NUMBER	1085,.01	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
BOUNDARY FLAG	1085,.05	SET ; 'B' FOR BOUNDARY
TYPE	1085,1	SET ; 'W' FOR WALKTHROUGH ; 'M' FOR MATERIAL INVENTORY
FROM DATE	1085,2	DATE
TO DATE	1085,3	DATE
ROUTINE/SPECIAL	1085,4	SET ; 'R' FOR ROUTINE ; 'S' FOR SPECIAL
INVESTIGATOR	1085,5	POINTER TO SURVEY MONITOR FILE (#1104)
ASSISTANT	1085,6	POINTER TO SURVEY MONITOR FILE (#1104)
SURVEY COMMENT	1085,7	1085.01 WORD-PROCESSING
SPECIAL REASON	1085,31	1085.02 WORD-PROCESSING
LOCATION	1085,100	1085.03 POINTER Multiple
LOCATION	1085.03,.01	POINTER TO LOCATION FILE (#1073)
LOC/SITE	1085.03,.02	FREE TEXT ANSWER MUST BE 3-10 CHARACTERS IN LENGTH
BLDG/SHIP	1085.03,.03	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
LOC/SUBLOCATION	1085.03,.04	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
LOC/AREA	1085.03,.05	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
OPERATION	1085.03,1	1085.05 POINTER Multiple
OPERATION	1085.05,.01	POINTER TO OPERATION FILE (#1087)
OPERATION COMMENT	1085.05,.05	1085.06 WORD-PROCESSING
SHOP	1085.05,1	POINTER TO AGENCY UNIT FILE (#1074)
AGENCY	1085.05,1.5	COMPUTED -- SHOP:AGENCY
FREQUENCY OF OPERATION	1085.05,2	POINTER TO FREQUENCY OF OPS FILE (#1106)
DURATION OF OPERATION	1085.05,3	SET ; '1' FOR LESS THAN 1 HOUR ; '2' FOR 1-4 HOURS ; '3' FOR 5-8 HOURS ; '4' FOR GREATER THAN 8 HOURS
NUMBER OF PERSONS AT RISK	1085.05,4	NUMBER BETWEEN 0 AND 1000
EXPOSURE RISK	1085.05,5	SET ; 'N' FOR NEGLIGIBLE ; 'M' FOR MARGINAL ; 'I' FOR IMMINENT ; 'C' FOR CRITICAL
NEGLIGIBLE RISK REASON	1085.05,6	1085.07 WORD-PROCESSING
NEED TO SAMPLE	1085.05,7	SET ; 'Y' FOR YES ; 'N' FOR NO
MACHINERY	1085.05,20	1085.08 Multiple

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  MACHINERY               1085.08,.01          FREE TEXT    ANSWER MUST BE 3-50 CHARACTERS IN LENGTH

PHYSICAL HAZARD           1085.05,30          1085.09     Multiple
  PHYSICAL HAZARD         1085.09,.01          FREE TEXT    ANSWER MUST BE 3-50 CHARACTERS IN LENGTH
  SOURCE OF PHYSICAL HAZARD 1085.09,1          FREE TEXT    ANSWER MUST BE 3-50 CHARACTERS IN LENGTH
  SIGHT HAZARDOUS         1085.09,2            SET ; 'Y' FOR YES ; 'N' FOR NO

ENG CONTROL IN USE        1085.05,40           1085.1      Multiple
  ENG CONTROL IN USE      1085.1,.01           FREE TEXT    ANSWER MUST BE 3-80 CHARACTERS IN LENGTH
  ENG CONTROL ADEQUATE    1085.1,2             SET ; 'Y' FOR YES ; 'N' FOR NO
  ENG CONTROL COMMENT     1085.1,3            1085.16  WORD-PROCESSING

OTHER CONTROL IN USE      1085.05,50          1085.11     Multiple
  OTHER CONTROL IN USE    1085.11,.01          FREE TEXT    ANSWER MUST BE 3-80 CHARACTERS IN LENGTH
  OTHER CONTROL ADEQUATE  1085.11,2            SET ; 'Y' FOR YES ; 'N' FOR NO
  OTHER CONTROL COMMENT   1085.11,3           1085.17  WORD-PROCESSING

RESPIRATORY PROTECTION IN USE 1085.05,60      1085.12  POINTER    Multiple
  RESPIRATORY PROTECTION IN USE 1085.12,.01    POINTER TO RESPIRATORS FILE (#1105)
  RESPIRATORY PROT ADEQUATE 1085.12,1          SET ; 'Y' FOR YES ; 'N' FOR NO
  RESPIRATORY PROT COMMENT 1085.12,2          1085.18  WORD-PROCESSING

PPE IN USE                1085.05,70          1085.13  POINTER    Multiple
  PPE IN USE              1085.13,.01          POINTER TO PERSONAL PROTECTIVE EQUIPMENT FILE (#1103)
  PPE ADEQUATE            1085.13,1            SET ; 'Y' FOR YES ; 'N' FOR NO
  PPE COMMENT             1085.13,2           1085.19  WORD-PROCESSING

MATERIAL PRODUCT          1085.05,80          1085.14  POINTER    Multiple
  MATERIAL PRODUCT        1085.14,.01          POINTER TO PRODUCT FILE (#1142)
  QUANTITY                1085.14,2            NUMBER      BETWEEN 0 AND 999999
  QUANTITY UNITS          1085.14,3            FREE TEXT    ANSWER MUST BE 2-25 CHARACTERS IN LENGTH
  SURV NUM                1085.14,4            COMPUTED  --  SURVEY NUMBER
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SURV TYPE	1085.14,5	COMPUTED -- TYPE
FR DATE	1085.14,6	COMPUTED DATE -- FROM DATE
TTO DATE	1085.14,7	COMPUTED DATE -- TO DATE
STRESSORS	1085.05,90	1085.2 POINTER Multiple
STRESSORS	1085.2,.01	POINTER TO STRESSOR FILE (#1083)
OTHER STRESSORS	1085.05,100	1085.15 POINTER Multiple
OTHER STRESSORS	1085.15,.01	POINTER TO STRESSOR FILE (#1083)
DUMMY	1085.15,1	FREE TEXT ANSWER MUST BE 1 CHARACTER IN LENGTH

DOCUMENT NUMBER	1140,.01	FREE TEXT ANSWER MUST BE 5 CHARACTERS IN LENGTH
SURVEY/BOUNDARY NUMBER	1140,1	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
ACTIVITY/COMMAND	1140,2	POINTER TO AGENCY UNIT FILE (#1074)
TYPE OF SURVEY	1140,3	SET ; '1' FOR INITIAL ; '2' FOR ROUTINE ; '3' FOR FOLLOW-UP ; '4' FOR INVESTIGATION ; '5' FOR OTHER
OTHER TYPE DESCRIPTION	1140,4	FREE TEXT ANSWER MUST BE 2-20 CHARACTERS IN LENGTH
DATE	1140,5	DATE
INVESTIGATOR	1140,6	POINTER TO SURVEY MONITOR FILE (#1104)
ASSISTANT	1140,7	POINTER TO SURVEY MONITOR FILE (#1104)
LOCATION	1140,8	POINTER TO LOCATION FILE (#1073)
OPERATION	1140,9	POINTER TO OPERATION FILE (#1087)
SHOP	1140,10	POINTER TO AGENCY UNIT FILE (#1074)
SHOP TELEPHONE	1140,11	FREE TEXT ANSWER MUST BE 4-20 CHARACTERS IN LENGTH
SUPERVISOR	1140,12	POINTER TO EMPLOYEE FILE (#1004)
COLLECTION INSTRUMENT 1	1140,13	POINTER TO COLLECTION INSTRUMENT FILE (#1086)
COLLECTION INSTRUMENT 2	1140,14	POINTER TO COLLECTION INSTRUMENT FILE (#1086)
INSTRUMENT2 CODE	1140,14.1	COMPUTED -- COLLECTION INSTRUMENT 2:INSTRUMENT CODE
INSTRUMENT2 MANUFACTURER	1140,14.2	COMPUTED -- COLLECTION INSTRUMENT 2:MANUFACTURER
INSTRUMENT2 TYPE	1140,14.3	COMPUTED -- COLLECTION INSTRUMENT 2:TYPE
SURVEY COMMENTS	1140,15	1140.02 WORD-PROCESSING
SYSTEM ID	1140,16	POINTER TO VENT SYSTEM FILE (#1147)
SYSTEM TYPE	1140,17	SET ; 'P' FOR PERMANENT ; 'T' FOR TEMPORARY
SYSTEM DESCRIPTION	1140,18	FREE TEXT ANSWER MUST BE 2-250 CHARACTERS IN LENGTH
SYSTEM STATUS	1140,19	SET ; 'S' FOR SATISFACTORY ; 'U' FOR UNSATISFACTORY ; 'N' FOR N/A
VENTILATION SOURCE ID	1140,50	POINTER TO VENT SOURCE FILE (#1148)
VENTILATION SOURCE TYPE	1140,51	SET ; 'P' FOR PERMANENT ; 'T' FOR TEMPORARY
HOOD DESCRIPTION	1140,52	FREE TEXT ANSWER MUST BE 3-250 CHARACTERS IN LENGTH
BLAST GATE/DAMPER POSITION	1140,53	SET ; '1' FOR 1/4 OPEN ; '2' FOR 1/2 OPEN ; '3' FOR 3/4 OPEN ; '4' FOR FULL OPEN ; '5' FOR NONE

DUCT DIAMETER	1140,54	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
FACE/SLOT AREA	1140,55	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
VENTILATION SOURCE STATUS	1140,56	SET ; 'S' FOR SATISFACTORY ; 'U' FOR UNSATISFACTORY
MEASUREMENT TYPE	1140,100	1140.01 SET Multiple
MEASUREMENT TYPE	1140.01,.01	SET ; 'DUCT' FOR DUCT ; 'FACE' FOR FACE ; 'SLOT' FOR SLOT ; 'CAPTURE' FOR CAPTURE ; 'STATIC PRESSURE' FOR STATIC PRESSURE
VELOCITY STANDARD	1140.01,1	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
FLOW RATE AND UNITS	1140.01,2	FREE TEXT ANSWER MUST BE 3-30 CHARACTERS IN LENGTH
FLOW RATE STANDARD	1140.01,3	FREE TEXT ANSWER MUST BE 3-20 CHARACTERS IN LENGTH
MEASUREMENT NUMBER	1140.01,4	1140.03 SET Multiple
MEASUREMENT NUMBER	1140.03,.01	SET ; '1' FOR FIRST ; '2' FOR SECOND ; '3' FOR THIRD ; '4' FOR FOURTH
AVERAGE VELOCITY	1140.03,1	FREE TEXT ANSWER MUST BE 2-20 CHARACTERS IN LENGTH
DISTANCE	1140.03,2	FREE TEXT ANSWER MUST BE 2-20 CHARACTERS IN LENGTH